Missouri

Office of Information Technology

2000

State of the State Information Technology Report

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Office of Information Technology
2000 State of the State IT Report

Executive Overview

Required by Missouri State Statue, the State of the State IT Report is submitted annually by the Office of Information Technology. Each agency is to provide a list of accomplishments within their information technology division for the previous calendar year. New to this year's report are submissions by the Office of the State Treasurer and the Office of the Secretary of State. Participation by the elected-official agencies reflects the broader cooperation that exists between the IT divisions of the executive, judicial, and legislative branches.

This year's report reflects changes in our IT community and a new direction for future reports. The 2000 State of the State IT Report now contains not only accomplishments of the IT division within the agencies, but has expanded to include anticipated projects and initiatives for the upcoming year. This year's report also begins to address the issue of accumulated demand. Currently there is not a standardized approach to measuring such demand. As the IT community implements project management, risk assessment and performance measurement principles, more data will be made available. Other areas of measurement to be addressed in the future are the return on investment of conducting business electronically and the value of IT to the organization. It is hoped that in subsequent years more data analysis across agencies will be available.

For Missouri State Government's information technology (IT) community, the year 2000 proved to be no less a challenge than 1999 when Y2K's deadline was on the horizon. Testimony to this observation is contained within this report highlighting IT accomplishments for the previous year. A major initiative with statewide impact for 2000 was the Statewide Advantage for Missouri (SAM II) accounting, budgeting and human resource system. With the accounting and budgeting components implemented in 1999, the year 2000 saw a major effort in the areas of financial post-implementation and finalization of the human resource phase. Seven agencies were migrated in November 2000 to the new semi-monthly pay plan with the remainder to follow in the first and second quarter of 2001. Glance at any of the agencies reported in this document and you will find numerous accomplishments for 2000 and an aggressive list of projects planned for the upcoming year.

Among the major changes for Missouri's IT community was the retirement of Mike Benzen, Missouri's first CIO appointed in July of 1995. Replacing Mike in the CIO position is Gerry Wethington. Gerry comes to the position with twenty-five years experience in information technology, the last seven years serving as the IT Director for the Missouri State Highway Patrol. Missouri's IT community is represented by the Information Technology Advisory Board (ITAB) which serves as a focal point for shared initiatives and statewide issues. During 2000 the ITAB chair was Bill Perkins, IT Director for the Department of Revenue. Moving into the chair position in 2001 is Ron Welschmeyer, IT Director for the Office of the Secretary of State.

Many challenges exist in 2001 for the Missouri State Government IT community. The growth of the Internet literally changes the way we live and work. Making state government services available electronically to citizens and businesses becomes a priority in this "wired" world. The ability to transact business with state government twenty-four hours a day, seven days a week from any location with an Internet access brings tremendous value to citizens who would rather be "online" than "in line." This method of transacting business offers great opportunity for state government in cost savings, economic development opportunity and improved business practices that will result in better government. The future is exciting, but it will also require a tremendous amount of effort and support from all facets of Missouri State Government to make e-government a reality. Missouri's IT community looks forward to reporting the first steps toward e-government in the 2001 State of the State IT Report.

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Office of Information Technology

Overview

The Office of Information Technology (OIT) serves as the focal point for the state's information technology issues and initiatives. Directed by Missouri's Chief Information Officer, the organization is responsible for areas such as IT policy and strategic planning, e-government, enterprise architecture and standards, project management and risk assessment as well as IT performance measurement. A productive relationship continues to evolve with the Office of Budget and Planning in the area of project oversight and risk assessment. Beginning with the FY02 budget year, all IT projects submitted by the agencies must be accompanied by a risk assessment and mitigation strategy plan. The outcome of this process will be the improvement of IT project results and an increase in the confidence level among appropriators of information technology projects. Statewide IT purchasing contracts continue to be a successful, collaborative effort between OIT and the Division of Purchasing. OIT staff also work closely with the agencies in other areas such as IT personnel recruitment and retention, IT education and training and statewide IT contract procurement. This office also represents Missouri's IT interests nationally in a number of important initiatives.

Listed below are the highlights of the major initiatives supported by the Office of Information Technology during 2000. They are ongoing projects and will be continued into this next calendar year and beyond.

E-Government

During this past calendar year, the Office of Information Technology directed its efforts toward the creation of a statewide e-government initiative. This initiative would enable Missouri State Government to interact electronically with citizens, businesses and other governmental entities creating the ability to pay taxes, renew motor vehicle licenses, obtain hunting and fishing licenses, make state park reservations, and a host of other activities via the World Wide Web. Another important facet of the e-government initiative will be the addition of a business-to-business (B2B) solution. This solution will allow the state to leverage its investment in SAM II by providing the means to not only order from vendors electronically, but to also electronically enable the entire order process through payment to the vendor. Currently private industry and a few other state

governments utilizing B2B have shown substantial savings in transaction costs. In other words, e-government will allow individual citizens and businesses a "one-stop shop" to interact with the state at their convenience, seven days per week, twenty-four hours per day, rather than at the state's convenience, five days per week, from 8 a.m. to 5 p.m. E-government will empower communities and individuals, whether accessed from a home, library, school or kiosk, thus improving the quality of life for all Missourians.

The e-government initiative resulted in two products: the *State of Missouri Strategic E-Government Architecture* and the *State of Missouri E-Government Report and Plan* (both documents may be accessed at www.oit.state.mo.us).

State of Missouri E-Government Architecture
This study, conducted with the assistance of IBM, provides a strategic analysis of the state's current IT architecture and readiness for e-government. Agency directors were interviewed for their input on vision and direction and joint workshops were conducted at the agency IT director level to identify technology issues and initiatives. This document will serve to drive the current architecture initiative to define the security structure and technologies to be utilized.

State of Missouri E-Government Report and Plan
Initiated by conducting an inventory of each state agency's transaction applications, this report identifies specific agency applications that are candidates for e-government with their estimated costs and implementation timeframes. The report serves as a blueprint detailing Missouri's e-government vision and issues such as privacy and security, accessibility, digital signatures, credit card fees, architecture, etc. Information detailed in this report serves as the bases for the statewide FY02 e-government appropriation request.

Submitted to the Office of Budget and Planning is an FY02 decision item requesting a two-year capital improvements appropriation to fund e-government projects. This request encompasses all agencies and identifies three categories critical to the ability of Missouri State Government to interact electronically with citizens, businesses and other governmental entities. Those categories consist of (1) an infrastructure capable of supporting the effort and a portal to provide simple access as a "single-point-of contact", (2) business-to-business (B2B), or government-to-business system to allow Missouri State Government to interact with vendors via the Internet, and (3) numerous agency web candidate applications that will provide services to citizens and businesses.

Enterprise Architecture

In July of 1995, as a result of Governor Carnahan's Commission on Management and Productivity, the Office of Information Technology (OIT) was created. One responsibility with its mission is to develop and implement an Information Systems Strategic Plan. One of the primary focus areas identified within the plan was an IT architecture. Also within the plan was a specific primary objective to develop a State of

Missouri enterprise architecture that facilitates business system sharing across departmental lines of responsibility.

To address architecture issues the Office of Information Technology and the Information Technology Advisory Board (ITAB) has appointed a technology architecture committee charged with the development of the enterprise architecture plan. This committee is currently drafting the plan that will include rules of governance as well as technical strategies. The plan will identify business drivers, architectural requirements and approaches for implementation, taking into consideration current investments as well as future requirements. The committee will identify strategies that should be considered, such as reusable components and "buy versus build" decisions.

The goal of a statewide enterprise architecture is to facilitate information sharing. The intent of the project is to provide a consistent methodology for planning and implementing technology solutions throughout state government, ensuring effective use of state resources and funds while providing a consistent, effective delivery of services to the employees, citizens, and businesses of Missouri. Major projects like the Y2K mitigation efforts and the implementation of the statewide accounting system, SAM II, highlighted challenges associated with disparate technology platforms and inconsistent implementation configurations, standards and procedures. The information technology community has recognized that to meet the business needs of the various governmental departments and effectively serve the citizens of the state, there must be an infrastructure that will allow access to information across department boundaries.

Enterprise architecture will cover the broad spectrum of technology environments to include networks, applications, databases, message and interface standards, middleware, security and other relevant domains. Guidelines will be developed to facilitate access and consolidation, provide security, eliminate duplication and insure that solutions are extensible and scalable.

A prime example of the need for consistent standards is depicted by the current set of database products supported by the State Data Center. After mainframe consolidation was achieved in calendar year 2000 the data center was required to support at least six separate database products. These separate products represent investments by the state in purchasing dollars, training dollars, maintenance dollars and manpower support. If architectural standards had been in place when these products were purchased the database function could be supported by two or three products, not six. Other similar scenarios exist that could be addressed with architectural guidelines.

The pervasive use of the Internet is one of the primary drivers of an enterprise architecture. Citizens have come to expect services to be provided through Internet connections and the state must be capable of responding to those demands. There are currently several departmental web sites that provide information or services. However, there is a more far-reaching need to provide integrated statewide services. The e-government initiative the state is currently involved in will provide the first opportunities

to establish architectural standards. Current e-government initiatives will be developed in conjunction with standards that will become part of the enterprise architectural standards.

Architectural standards will require an ongoing commitment by the state. Development of an IT architecture requires a continuous vitality process. The evolution of new products, technology trends and user demands will require a constant update to architectural standards to ensure that data and service remain accessible. The end result will be a more effective use of state resources and a more efficient delivery of services.

Performance Measurement

To ensure our IT agencies and investments serve the business goals of the state, the Office of Information Technology identified a performance measurement capability that would serve as the foundation for measurement-based management for delivering IT projects on-time, on-budget, on-specification with the requisite resources.

By recommendation of the Information Technology Advisory Board (ITAB) the Performance Measurement Committee was tasked to define a standard methodology to evaluate resources (i.e. human, monetary and tools) during IT project design, development and implementation. The key objectives of the committee were to develop effective metrics and management techniques for:

- Stabilizing IT project-delivery performance,
- Creating linkage between development and operations performance,
- Establishing a central resource for conveying best-practices for improving performance, and
- Ensuring customer expectations are met.

In the committee's quest to establish a metrics and measurement program, they developed a project data sheet to capture a standard set of information on all IT projects. This established a baseline against which to compare cost, schedule, risk, project size and complexity, business value and other key information. Gathering and maintaining information on these components will provide management with insight to focus IT resources where they can have a measurable impact on an agency's, and ultimately the state's, strategic objectives. The information collected becomes the backdrop for effective resource planning and provides the measurement foundation by which management can determine to what degree IT contributes to their agency's mission.

Project Management Initiative

The Office of Information Technology, in cooperation with the Office of Budget and Planning, has teamed with the Information Technology Advisory Board (ITAB) to develop and implement project management policies, guidelines and best practices. The training program implemented two years ago remains in place and has produced seventy-eight (78) certified project managers within Missouri State Government.

This year project management policies, guidelines and best practices were developed and published on the project management web site. A project management review team consisting of four ITAB members and a representative from the Office of Information Technology was appointed and reviewed twenty-eight (28) risk management plans. A new training contract was awarded and will begin in early calendar year 2001.

The project management review team developed a project review checklist used in reviewing risk management plans. This checklist ensures consistency and fairness in the evaluation process. Big strides have been made in risk management and a repeatable process and sustainable results are being produces in many projects. Metrics and measurements are being developed to measure results and development of detailed project plans. Work breakdown structures will be required for projects in the upcoming year.

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Office of Administration

Accomplishments

SAM II

Work began on the SAM II project in FY96 with bid document creation, evaluation of bids, and defining requirements to replace the existing statewide financial systems operated by the Office of Administration. The system initially targeted for replacement was the Budget System, but as the analysis progressed, the need to also replace the base Statewide Accounting System (SAM) and the payroll system (PARS) was realized and pursued. The scope of the project was increased to include replacement of all Office of Administration (OA) statewide financial systems including SAM (accounting system), PARS (payroll and personnel), Budget, MAPS (procurement), Fixed Assets, and various other personnel subsystems such as Service History and Position Management. The scope and complexity of the project was manifested further by the fact that most state departments have financial and personnel subsystems that interface into OA's systems. Replacement of the OA systems required extensive changes to those departmental subsystems and coordination efforts.

Funding for SAM II was partially acquired in FY97 and additional amounts were added in FY99 and FY01. Total SAM II appropriations for OA were $46,757,664 as of July 1, 2000 and expenditure of that amount began in FY97. A total of $35,042,450 had been spent on SAM II through June 30, 2000.

The SAM II Project has two primary phases – Financial and Human Resources (HR). The Office of Administration contracted with American Management Systems (AMS) to implement both phases. Phase I (Financial) was implemented by installing the AMS Advantage financial package in July 1999. The Financial phase consisted of the implementation of the AMS Advantage financial package replacing SAM, MAPS, Budget Subsystem, Inventory and Fixed Assets Subsystems.

Implementation of the Advantage financial software and BRASS (Budgeting Subsystem) began in July 1999. All agencies are now using these systems either directly through on-line transactions, or through agency-interfaced transactions from internal departmental

systems. SAM I, MAPS and their related Budget Subsystem operations ceased day-to-day operations in September 1999 after the close of the FY99 lapse period. All FY00 financial transactions were recorded in Advantage with all state agencies participating in that conversion. Just prior to the start of FY00, over 5,000 state agency fiscal staff received SAM II training. Each fiscal staff person received 4 or more courses of training as there were 15 courses offered on various topics and areas of SAM II. Additional SAM II training courses will continue in FY01 as needed by agencies. A total of 527 agency fiscal staff received SAM II training in FY00 as part of this ongoing training program.

The SAM II system offers agencies access to on-line financial information through the SAM II Data Warehouse. The SAM II Data Warehouse allows agencies the option to download data to their desktops or to other internal data marts and create specialized, customized reports. Additional reporting options exist in the data warehouse to provide more standard reports. In FY00, a committee of project and agency staff commissioned by the Information Technology Advisory Board (ITAB) reviewed and defined additional standard reporting needs. Those needs were then addressed by creating reporting options within the data warehouse that can be used by agencies in addition to the base-line reports in SAM II. Also in FY00, several enhancements to the SAM II Data Warehouse were made resulting in improvements of accuracy and consistency of the data, the ease of access to the data, and adding many data elements not previously in the warehouse.

SAMII Financial post-implementation was a major effort in FY00. The post-implementation team completed over 833 work requests. This team also manned the SAM II Help Desk, assisted agencies with interfaces, resolved issues and problems, and implemented systems enhancements. The on-line bid evaluation for the OA-Division of Purchasing and Materials was a major enhancement implemented in January 2000. This enhancement allows the public to submit on-line bids on state services and commodities through the Internet as well as accessing the bid information.

The new SAM II budget subsystem (BRASS) was installed on schedule for preparation of the FY01 budget process. This occurred in August 1999. The new subsystem offers flexible operation and on-line update and reporting capabilities being used extensively by Budget and Planning as well as agencies. It was the basis for analysis and available for use by the legislative staff committees during the FY01 budget process. The BRASS system began operations for the FY02 Budget Year in August 2000.

The Human Resources (HR) phase of SAM II was a major effort in FY00. Thousands of staff and AMS man-hours were directed towards development of the HR phase in FY00. Work was directed towards policy and programming development, coordinating with agencies on interfaces, coordinating with vendors on changes due to bi-monthly payroll, and training state project personnel. The HR project began production operations in November 2000 with about 25% of state employees to be paid by HR at that time. Agency conversions to HR will continue in FY01 with the last group to be completed in April 2001. The HR project replaces the state's current PARS system and related subsystems such as Service History and Position Management.

SAM II Benefits

The new SAM II system is the official, centralized financial management system for the state. The state has an annual budget of over $18 billion with thousands of agency fiscal and personnel staff processing daily transactions. The new system has had to address diverse agency reporting and management needs while still consolidating data to standard summaries used in statewide financial statements. Missouri State Government must provide complete, consolidated financial statements to facilitate bond sales and other financial reporting. The SAM II system is the basis for the state's financial information and budget processing. The State of Missouri and its citizens benefit from SAM II's ability to quickly produce financial data allowing agency staff to make improved decisions on the use of limited resources. SAM II has also begun an effort to allow vendors to bid electronically on state contracts directly enabling Missouri citizens to deal with state government more effectively and efficiently. Implementing electronic business initiatives through SAM II will be an ongoing project with continuing benefits to citizens.

With the implementation of HR in FY01, the state is replacing a time consuming, batch oriented payroll and personnel system with a more on-line system. The data warehouse for HR will be accessible to state personnel officers for on-line analysis of data and customized reporting.

SAM II Project Management Summary and Staffing

The SAM II Project is one of OA's highest priorities as defined in the OA Strategic Plan. The project is also sponsored by the SAM II Steering Committee that oversees and reviews SAM II plans and policies. The Steering Committee consists of high-level agency management and fiscal representatives that provide guidance to OA and contractor management.

In 2000 the SAM II project management team consisted of the following OA directors:

- Jim Schutt – OA/Division of Information Services Director
- Jim Carder – OA/Accounting Director
- Lee Capps – OA/Personnel Director

An Operations Committee of OA division directors and staff has been created to review the requested changes and to oversee the operations of the new systems.

Agency liaison groups have also been in place since the early stages of SAM II to provide guidance and review on project policies, procedures and system changes. These groups will continue in a more limited, ad-hoc role during the post-implementation effort of SAM II Financial while other liaison groups have been created for HR implementation.

The project is staffed jointly between AMS contractor staff and state personnel. State personnel are primarily from the Office of Administration, but other departments have loaned significant numbers of staff during the implementation of SAM **I** Financial. Other agency staff have been loaned to the HR Phase for FY00-01.

Accomplishments for other Divisions within Office of Administration

Imaging

During 2000, we have embarked upon a project to migrate from our existing department-wide AS/400 imaging system to a true client-server system. The new imaging system uses Graphical User Interface (GUI), a common windows-type interface using a mouse and screen icons to navigate the system. This has become the dominant navigation system available and is most comfortable and productive for our employees. Included in this new system is the capability to capture documents in their native format, such as WORD and EXCEL, and store those documents in that format. This relieves the necessity of scanning documents back into the imaging system. Also included is the capability to email, FAX and post document images on the World Wide Web.

The Division of Purchasing and Materials Management has established its bid documentation entirely on the new system, including converting images from the previous system to the new system. This system communicates with the SAM II data warehouse, which provides information to automatically fulfill indexing requirements that previously took time to enter by hand. We also expect to have a sub-system in place by year-end that will make purchasing documents available on the World Wide Web. Access to images via the World Wide Web has only recently become feasible. With the proposed system, we will be in a position to exploit this method of delivering services electronically to state agencies, state employees and the general public. The new system also has the capability to FAX or email documents electronically (without printing them first). This saves a great deal of effort by state employees plus the cost of printing.

The Division of General Services, Central Accident Reporting Office, moved from the old system to the new imaging system. The General Services system deals with state workers compensation documents and the information flow within the section and the Office of the Attorney General as well as with workers compensation contractors and health care providers. This system communicates with the existing mainframe risk management system, making the entire process more responsive to state agencies, state employees, attorneys and health care providers. Web, FAX and email capabilities will improve productivity and service to state agencies, state employees and the general public.

MOBIUS

We have implemented, in a pilot mode, a report distribution system called MOBIUS DocumentDirect on the mainframe computer. This system allows reports to be delivered electronically instead of being printed and distributed manually. The greatest benefit we expect from this system is the improved delivery of required reports, the ability to index by report section and even the ability to distribute by section instead of delivering entire reports where only one piece is needed. Our pilot project has been in the General Services Central Accident Reporting Office. This section utilizes the electronic reports for the review of activity plus, the safety officer is now able to analyze accident reports online rather that obtaining printouts. SAM II Financial and SAM II HR are both rapidly working toward adopting MOBIUS as their standard delivery method statewide. This

will mean significant gains in efficiency and ease of maintenance with the added benefit of reducing printing costs. This system also allows for the archiving of documents online rather than hard copies on desktops or in filing cabinets. The MOBIUS system will be available to all state agencies.

ON-LINE BID

The Division of Purchasing and Materials Management successfully went live with their new On-Line Bidding web service on May 9, 2000. On-Line Bidding was developed in partnership with American Management Systems (AMS) and provides vendors with the convenient online web access to the Division of Purchasing and Materials Management's bid information as well as the ability to register and update profile information.

Guests at the On-Line Bidding site can view information on open bids, closed bids, bid history, bid prices and the awarded vendor and price, as well as locate information on the state's past purchases of a particular commodity/service. Vendors can also take advantage of the self-registration feature offered by On-Line Bidding to register to provide specific commodities/services to the state. After registering vendors can view and maintain their profile information in a secure environment. Registered vendors will receive automatic e-mail notifications of bidding opportunities and may submit bids online.

In addition to the benefits that On-Line Bidding has provided for the state's vendors, the Division of Purchasing and Materials Management has also benefited from reduced mailing cost for bid notifications due to the e-mail notifications, increased competition as a result of broader web exposure and more efficient communication with the vendor population. In addition On-Line Bidding facilitates the evaluation of bids by allowing for the automatic generation of electronic spreadsheets for bid responses.

Planned Projects

SAM II

SAM II implementation will continue to be a major focus of the Office of Administration in FY01 and FY02. The HR agency conversions started in November 2000 and that work will complete in April 2001. Final changes and testing will be completed in FY01 as well as coordinating with agencies on interfaces. Hundreds of payroll and personnel agency staff will be training in FY01 on HR in advance of their conversion dates. Enhancements to the SAM II Financial Data Warehouse will be implemented in FY01. Improvements continue to be requested by agencies as well as by the Office of Administration.

- In 2001, the plan is to move the **Division of Personnel** and the **Division of Accounting** from the AS/400 to the client-server imaging system. This is dependent upon adequate funding in the FY2002 budget.

- Plans are in place to utilize the imaging system to make personnel documents, such as applications and resumes, available online to state agencies through FAX, email and Intranet methods. This will enhance the responsiveness of the statewide personnel system.

- The **Division of Accounting** garnishment section will continue to maintain high security on its sensitive documents. Accounting will benefit from improved workflow and efficiency in providing services to state and federal agencies, state employees and attorneys. Plans are in place to utilize the ability to capture documents from the mainframe environment directly into the imaging system. This will bring reports in without the need to scan them.

- Plans are in place to complete the adoption of MOBIUS by SAM II and to exploit the capabilities of MOBIUS to provide greater enhancement and efficiency in the delivery of reports both within the Office of Administration and statewide to state agencies.

Accumulated Demand

SAM II

As of July 1, 2000 there were 335 outstanding work requests related to the financial phase of SAM II. With the implementation of HR in FY01, the backlog of work requests is expected to peak by the end of FY01 to approximately 450. On-going resources to address this expected backlog are requested in the FY02 budget. The assistance being requested is needed to keep the backlog of requests to a manageable level and to keep the requests recent.

Department of Agriculture

Accomplishments

Y2K Success

The Missouri Department of Agriculture (MDA) IT personnel were responsible for ensuring all MDA applications were Y2K compatible. This project was complete in-house and saved taxpayers hundreds of thousands of dollars.

Personal computer replacement policy

This policy ensures MDA employees have the technology required to perform their duties while eliminating the need to repair obsolete equipment. This policy has enhanced the productivity of our employees and will increase in value as our customers utilize technology to do business with MDA. This policy requires personal computers to be replaced within three years, which is their warranty period.

Helpdesk Implementation

Our helpdesk was implemented utilizing existing resources. The application is written in Lotus Notes and is used to log all calls related to IT services. Benefits of this function include faster response time to users, enhanced tracking of calls, and the ability to identify problem areas.

Performance Management

MDA adopted a different performance appraisal system this year. Our new Performance Management System is focused on essential functions of the department, the outcome(s) or product(s) that the employee is responsible for, and the activities which will produce the desired outcomes. This system, in conjunction with our helpdesk, provides enhanced management of projects associated with achieving the departmental goals as outlined in our strategic plan.

Application Development

Development of new systems to meet customer needs include: Meat Processors, Animal Care Facility, Livestock Markets, Milk Ring, Tobacco Distribution, Centralized Faxing, Corporate Farms, Grain Regulatory, Petroleum Laboratory Bar coding, LPG, and a

Conference Registration System. The development of these systems was driven by requests from our users to ensure the delivery of services to their customers.

Training

250 MDA employees attended in-house training provided by MDA's IT staff. IT personnel attended professional training related to standard MDA software products such as: Lotus Notes, Microsoft Office, Perl, Front Page, and Visual Basic. In addition, a cross-training program of IT personnel has been implemented to ensure support of essential departmental functions.

Planned Projects

E-Government

MDA will participate in the statewide e-government initiative. It is our intention to provide this new delivery system to our customers during the next fiscal year. Many issues will be identified and addressed to ensure this initiative is successful. MDA will actively participate as instructed by the Office of Information Technology. In turn, many of our systems will be modified to interface to this new delivery system.

Network Upgrade

It is imperative that we upgrade our network from Token Ring to Ethernet if we are to continue to provide reliable network services. Faster networks with more bandwidth are required to support new and emerging applications, such as e-commerce. In addition, Token Ring topology has become obsolete.

SAM II

Our IT staff will be assisting the Human Resources Department within MDA as the Human Resource module of SAM II will be implemented for MDA in April, 2001. IT staff will continue to enhance the interface with SAM II in terms of the Fiscal module.

Project Management

Training for project management will be provided for one member of MDA'S Information Technology staff per year. The goal of this initiative is to reduce the risks associated with project development and provide a better product in a more timely fashion.

Application Development

Planned systems include the MASBDA Loan System, Seed System, Feed Tonnage System, and modifications to those systems affected by the e-commerce initiative. Additional IT training is planned to enhance project functionality and timeliness.

Department of Conservation

Overview - Information Technology Services (IT) - Responsibilities And Activities:

- Technology Planning
- Systems Research and Design
- Application Development
- Customer Technical Support
- Two-Way Radio Operations/Support
- Telephone Operations/Support
- Network and Computer Operations/Support
- E-mail and Wide Area Network Operations/Support

Accomplishments

- Implemented corrective actions necessary to the Department's technologies to ensure a successful Y2K change over. This was with the use of internal accomplished IT staff and no outside contractor support.
- With the approval of the agency director, implemented a four-step program to address and resolve the issue of staff recruitment and retention.
- Prepared 422 purchase orders and processed invoices worth almost $2,331,818 million in new computer hardware and software.
- Supported the Forestry Conservation and Communications Association (FCCA) by sponsoring and supporting the annual conference in Excelsior Springs, MO.
- Supported the International Association of Fish and Wildlife Agencies (IAFWA). Jim Poole is chairman of the Information Management Committee and is also on the Automated Wildlife Data System Committee.
- Implemented a Change Management system for all major projects within IT.
- Developed and implemented six new software applications, including Protection Point system, Forest Inventory and Missouri Conservation Atlas.
- Designed and implemented a new version of MDC Intranet internal Web Site.
- Implemented a new web-enabled release of GroupWise Electronic Mail. This new release allows email messages to be accessed from over the Internet.
- Implemented a new release of Corel WordPerfect Office Toolkit (9.0).
- Upgraded anti-virus software to Norton Anti-Virus Version 5.0.

- Replaced 7 field servers and converted to Windows NT.
- Replaced 3 servers in Central Office and 1 at Columbia Research.
- Upgraded Central Office network from OS/2 to Windows NT.
- Upgraded 6 WAN circuits to field offices.
- Installed new local area networks at Lost Valley and Liberty and added them to the WAN.
- Replaced 369 PCs with new Windows NT computers, including Private Lands and 85 Protection agents home PCs.
- Completed software upgrade to begin conversion from SupportMagic 4.5 to 6.0.
- Added new servers in Central Office to support electronic commerce and distribution of department maps via the Internet.
- Processed 8,219 trouble calls through the Help Desk.
- Supported over 1,288 PCs, 30 LANs and 30 WAN locations across the state.
- Implemented DHCP.
- Implemented Microsoft SMS for Central Office and eleven WAN sites.
- Implemented new backup software (ArcServ) and hardware (PowerVault) for the Central Office server complex. Allows for automated tape backups of very large files without IT intervention.
- Installed a new Mitel telephone system for the Central Office that included improvements in Auto-Attendant and Voice Mail, and upgrade and expansion of PBX Room.
- Implemented Automated 1999 Waterfowl Reservation System with new IVR technology (September, 1999).
- Implemented premier videoconferencing services at Powder Valley Nature Center.
- Participated in Distance Learning Project and consulted on satellite, videoconferencing, and Internet distance learning technologies.
- Developed and tested Automated Managed Deer Hunt System for introduction on July 1, 2000.
- Replaced 475 new mobile and portable radios.
- Constructed a new relay site at Kennett, Mo.
- Added Forestry relay on a site at Seymour, Mo.
- Maintained 78 relay tower sites, 65 base stations, 165 radio relays, over 1,300 mobile radios and over 975 portable radios.
- Maintained over 1500 telephones, 3 PBXs, 51 electronic Key Systems, numerous FAX machines, audiovisual and public address equipment at 115 locations across Missouri.
- Completed radio license applications for six new sites.
- Updated over 40 radio licenses.
- Upgraded approximately 1/3 of the mobile and portable radios to narrow band.
- 125 relays are now narrow band compatible.

Planned Projects

- Development of RAPTOR, a new financial and work management system that will interface with SAM II and provide functionality for work planning, budgeting, expenditure monitoring, tracking and reporting accomplishments.
- Implementation of a web-enabled Human Resources supplemental system which will provide functionality not currently provided by SAM II, including training records, applicant tracking, web-based benefit enrollment, drug testing and time and leave reporting.
- Implementation of a new Imaging and Records Management system that will initially be used to manage deer check station data, but eventually rolled out for other department imaging applications.
- Conversion from Token-Ring to Ethernet topology.
- Implementation of Ethernet switching technology at the Central Office.
- Implementation of MDC's first Electronic Commerce application that allows sales of publications, clothing and trinkets over the World Wide Web.
- Implementation of a new inventory system for the warehouse to support e-commerce applications.
- Completion of SMS rollout across the entire state.
- Implementation of SAM II HR package.
- Upgrade circuits of WAN sites.
- Implement Socket Remote Network Connection for dial-in access for remote sites.
- Implement VPN firewall in the Central Office.
- Complete Conservation Agents Home PC program with installation of PCs in the homes of the last 85 Conservation Agents.
- Conduct a network security audit.
- Complete backup, recovery, change management and other activities necessary to implement ORACLE in the PROD environment.
- Implement a Water Pump & Flume Level Alarm system at Roaring River hatchery.
- Replace 257 PCs, 20 servers and 44 network printers.
- Develop and administer an executive computer training program for MDC top-level management.
- Develop a five-year telecommunications plan.
- Implement a pilot project for Protection that tests wireless access to the Point Of Sale (POS) system from the agent's hand-held computers used in the field.
- Participate in the department's Pay For Performance (PFP) program.
- Participate in the department's leadership academy.

Accumulated Demand

- Request to build additional tower sites to increase/improve portable radio coverage to the same level as mobile radios.
- Request to provide access for field sites to the department's Distribution Center

Inventory system.

- Request for a Warm Water Hatchery management system.
- Contact Management system.
- Forest Fire Reporting

Department of Corrections

Accomplishments

Information Systems Infrastructure Review

In December of 1999 an assessment of the department's information technology opportunities and obstacles was concluded. The study was a combined effort of the Office of Administration Division of Budget and Planning, the Office of Information Technology, and the Information Technology Advisory Board. The results of this study offered an in-depth look at technology issues within the department and recommendations for future courses of action. The study reached three conclusions:

- Computer applications do not adequately support department programs.
- Much of the technology in use is obsolete.
- Information technology staff is not of sufficient size to effectively perform the mission.

The Information Technology Program and Infrastructure Review presented fourteen specific recommendations for action. It recommended funding necessary to bring department information technology functions to the same staffing level as other Missouri State Government agencies of a similar size. Several of the recommendations were completed in 2000 or are currently underway. Efforts in 2001 will continue to focus on study recommendations.

Information Strategy Plan

In June of 2000 a formal update to the department's Information Strategy Plan was concluded. Originally developed in 1997, this was the first time the plan had been updated. The updates to the plan include activity and data models, business areas and business systems. There are currently twelve business areas and forty-one business systems identified. The department executive currently plans to prioritize these business systems prior to the beginning of FY2002.

Technical Architecture Assessment

One of the recommendations from the Information Technology Program and Infrastructure Review was to assess the technology base of the department in order to

understand the technical options beyond our current platforms and align the department with evolving state technology architectures. This assessment was completed in August, 2000 and presented two major findings:

- The AS/400 and Windows NT will provide reliable computer environments for the future.
- The current data wiring presents the highest risk to continued services to the department and to the ability to use new technologies.

The assessment also recommended the development of an Information Technology Strategic Plan focusing on traditional applications, office automation applications and visualization, multimedia and collaborative applications. Funding to begin to address the data wiring risk has been requested in the FY2002 budget. Because of the limitations of the current data network, until the requested funding is received most application development activity will continue to focus on traditional CRT-based applications.

Migration to SAM II

During calendar year 2000 a significant amount of effort was placed on migration to the new statewide SAM II Financial and Human Resource systems. To support these systems, twenty-one new Local Area Networks (LANs) and servers and 144 personal computer workstations were installed. Included in this installation was the application and Microsoft Outlook for mail services. Since its implementation in July several upgrades to the financial component have been applied. Installations to this date have only focused on those staff needing access to the system for data entry purposes. Efforts have yet to begin to install networks and workstations for staff requiring access to the SAM II data warehouse for information retrieval.

Computer Applications

During 2000 forty-six major enhancements to the department's offender management system (OPII) were made. These additions were made at the direction of the user steering group, the Information Quality Task Force, which meets monthly to review and give direction regarding this essential computer application.

Two new applications, Grievance Management and Training Management, were developed and will be implemented shortly after the first of the year. These two applications were the first to be developed with the Cool:PLEX software tool selected by the department. The Training Management application will be the first true client-server application for the department.

Very late in the calendar year work began on three other applications: Offender Health Services, Accident and Injury Tracking and Visitation Management. All of these systems are currently in the analysis or design phase. Transition to construction will occur some time in 2001.

Network Support

Aside from installation of the SAM II technical infrastructure, there were five new Probation and Parole offices that opened in 2000. New LANs, servers and seventy-nine workstations were installed in support of these. Additionally, five offices with 125 workstations were relocated during the year. One new institution, South Central Correctional Center, was opened at Licking. Over fifty networked PCs and ninety-one terminals were installed in support of this facility.

Planned Projects

Help Desk Automation

In 2001 the department's help desk function will be re-engineered. The direction established for this functional area was defined in the Infrastructure Review completed in 2000. Along with the realignment of responsibilities and expansion of coverage, a software package will be acquired and installed to support the recording, resolution and analysis of problems reported. Significant additions to the staffing level (sixteen FTE) are planned for this same period, but this is totally dependent on receiving associated funding in the FY02 budget.

Upgrade to Exchange Server

Currently the department has two electronic mail systems. One, OfficeVision, runs on the AS/440 and supports the users who access the system through CRT terminals. The other, Outlook/Exchange, runs on network connected PCs and supports users who access the system with these devices. The Exchange Server is currently saturated. An upgrade to the current server is planned in early 2001 so that graphical mail capability can be given to those users requiring it. Approximately 200 requests for this access are pending at year-end 2000.

Installation of Firewall

The department is planning to install its first Internet firewall in early 2001. This resource will be used to monitor and restrict staff access to Internet resources outside of the department's network and to ensure that no unauthorized access to department resources can be accomplished from the outside.

Data Warehouse Pilot

In 2001 the department plans to implement a data warehouse pilot project. The objective of a data warehouse is to provide department staff with an efficient and effective way to create reports and conduct analyses of offender information. The implementation of the production warehouse will likely be a multi-year project and will not begin until FY02 funding is available. However, the pilot is expected to be complete by mid-year. There are three primary goals of the pilot:

- Prove the concept.
- Determine the most appropriate software tools to extract, transform and access data.

- Determine the appropriate data model for implementation within the department.

Conversion from AS/400 OfficeVision

In 1999 IBM announced that OS/400 Version 4 Release 4 would be the last supported release of the AS/400 operating system. A subsequent announcement indicated that support for OfficeVision would be extended to one additional OS/400 release. The department has a substantial number of users who require the electronic mail and document processing capabilities that this product has provided. Additionally, the document processing capabilities of OfficeVision are highly integrated into the primary offender management application, OPII. During 2001 efforts will begin to migrate the department to a different electronic mail and document processing software platform. Early emphasis will be placed on developing a formal plan and selection of replacement software. If funding permits, the department will begin the migration to the new products.

Automated Fingerprint Identification

With the support of the Missouri Highway Patrol and federal funding, the department in 2000 began installation of Automated Fingerprint Identification (AFIS) equipment in the three reception and diagnostic centers. This equipment is capable of editing fingerprints for quality and then transmitting them electronically to the Patrol's Criminal Records Division. During 2001 efforts will focus on integrating the AFIS systems with the offender management application (OPII) so that the supporting identification information can be retrieved and automatically included in the record that is transmitted to the Patrol.

Image Processing

In 2000 some progress was made relating to the incorporation of offender images into the central database. During this period transition from standard to digital offender photographs at each institution concluded. A limited pilot project focused on retrieval of these images and incorporation into paper records. In 2001 work in this area will continue with a focus on business processes and computer programs to support retrieval of images from the cameras and incorporation into the Offender Management (OPII) database. If successful, images such as facial photographs and scars, marks and tattoos will be collected and stored as a normal part of the electronic offender record. These images will be available to be displayed on any capable department workstation as well as printed as a part of a paper record.

Computer Applications

Four applications currently being developed will be brought online in 2001. Two of these, Grievance and Training Management, will be placed in production in the first two months. A third and fourth, Visitation Management and Accident and Injury Tracking, are planned for implementation by mid-year. Additionally the analysis phase of another application, Offender Health Services, will be starting immediately after the first of the year. Because of the size of the business area, it is likely that development of this system will require more than a year. However, more specific estimates will be available at the conclusion of the analysis phase at mid-year.

Efforts in 2001 will also focus on improving the integration of offender data from OPII into the Criminal History Repository located at the Missouri State Highway Patrol. Using the same real-time electronic interface that supports the Wanted Person Hit system, updates to the repository will be transmitted to the Patrol as changes to the offender's record occurs within the Department of Corrections.

The Information Technology Program and Infrastructure Review made a recommendation to transition the legacy computer applications of the department from an outdated CASE tool to the state standard, Cool:PLEX. Although the size and complexity of the department's primary Offender Management application, OPII, precludes rapid and simple transition, a detailed plan will be developed during this timeframe that outlines a strategy and the resource requirements for such a task. Actual transition efforts will begin in 2002 and are dependent on funding that will be requested in the FY03 budget cycle.

Network support

A number of activities relating to the data network have already been identified as 2001 projects. These include installation of the following:

- LANs in three new Probation and Parole offices, including thirty networked workstations.
- Relocation of five Probation and Parole offices, including approximately 125 workstations.
- Replacement of obsolete workstation and LAN technology, estimated at approximately one third of the department's current 3,000 workstations and 90 LANs.
- Opening of two new institutions, including LANs, and approximately fifty workstations and 100 CRT terminals each.

In addition to the above, we expect considerable demand for expansion of SAM II workstations. Although most of the information collection infrastructure has been installed in 2000, very little emphasis has been placed on workstations for information retrieval, especially from the data warehouse. Network support demands in support of this business requirement are expected to be significant.

Accumulated Demand

Significant backlogs of accumulated demand exist in several functional areas within the Information Systems' area. In applications development there are 128 enhancements pending for the Offender Management system (OPII) alone. These enhancements represent requests that have been analyzed, approved and prioritized. At current staffing levels, this represents 2 ½years of work. In addition to the OPII backlog, the forty-one business systems identified in the Information Strategy Plan represent potential candidates for new computer applications. These will be prioritized by mid-year and will then be identified as formal projects with the intention of development beginning in the 2nd half of 2001.

Within network support there exists an average of 125 backlogged service requests that require onsite support. This represents an average of two months of work. With current staffing levels this number is likely to remain relatively stable. However, if the demand for SAM II workstations keeps growing, there is a high probability that this backlog will grow considerably. Another factor to be considered is that the demand for networked PCs has probably been artificially restricted due to the severe limitations of the department's data network within our institutions. If funding is received to upgrade our networks, a significant growth in PC workstations will follow.

Coordinating Board for Higher Education

Overview

The Department of Higher Education handles IT projects from its core operating budget which includes state general revenue, federal funds, and funding resulting from the administration of the Federal Family Education Loan Program (FFELP). For FY2002 the CBHE has requested authorization for increased spending authority from federal FFELP funds for our e-government project.

Accomplishments

- Disbursed over $38 million to 24,418 students in the state grant, scholarship, and loan forgiveness programs to help finance students' higher education.
- Disbursed over $15.8 million to 12,754 students in the Charles Gallagher program.
- Disbursed over $15.3 million to 8,024 students in the Bright Flight program.
- Disbursed over $3.9 million to 1,942 students in the College Guarantee program.
- Disbursed over $2.8 million to 1,319 students in the Advantage Missouri program.
- Disbursed over $460,000 to 379 students in the Marguerite Ross Barnett program.
- Disbursed over $185 million in over 112,000 disbursements in the FFEL (Federal Family Education Loan) program through ATOM (Automated Transfer of Money) to help finance students' higher education.
- Web projects that enhance student, school, and lender abilities to get information efficiently and effectively and reduce time and effort of agency staff.
- Online access to grants and scholarship information and applications (currently PDF).
- Online access to FFELP student loan information via pass-through to our server.
- Online access to student loan applications, forms, and information packets.
- Current web site compliant with Americans with Disabilities Act.
- Online access to entrance and exit counseling via partnership with Mapping Your Future.
- New web site designed, developed, and ready to be released.
- Moved new web server behind the state DMZ for security.
- Online access to department data collection forms.

- Online access to order publications.
- Completed numerous improvements to internal systems that process the state grant, scholarship, and loan forgiveness programs, as well as the Federal Family Education Loan (FFEL) program to benefit the agency staff and ultimately the customer with more efficient systems. Some examples follow:
    - Advantage Missouri: completed over 200 requests; developed renewal application system, certification system for renewal students; incorporated into warrant tape system for disbursement.
    - ATOM: completed over 200 requests; completed coding for common line version 4 loan maintenance, reallocation process change; paperless process for school roster report.
    - Gallagher: completed over 80 requests; enhancements to processing FAFSA data, user interface; incorporated into integrated warrant tape system.
    - Bright Flight: completed over 50 requests; status letters; warrant tape system.
    - College Guarantee: completed over 50 requests; enhanced user process to award funds to students; warrant tape system.
    - Marguerite Ross Barnett: completed over 10 requests; multi-year data access; warrant tape system.
- Trained IT staff in new technologies to benefit the agency and ultimately the customer with better IT systems.
- Implemented new e-mail system for easier access to agency staff.
- Added several applications to the imaging system to enable agency staff to save time and effort with information retrieval.

Planned Projects

Note: some of these are associated with and dependent upon the FY2002 MOSTARS (federal) IT budget request for e-government.

- Increase IT staffing, primarily for web development.
- Integrate the state grant, scholarship, and loan forgiveness systems and the ATOM system and web-enable certain aspects.
- GEAR UP grant administration via the web.
- Continued development of new web site.
- Online approval of grant and scholarship student rosters.
- Online access of disbursement and loan information housed at CBHE.
- Database implementation for collection of grant and scholarship information.
- Online PLUS loan applications and instant credit checks to verify eligibility.
- Consolidated database information for program inventory.
- Implementation of an intranet.
- Move CBHE network behind state firewall.

Accumulated Demand

There are approximately 10 requests that are backlogged due to insufficient personnel resources that are a lower priority than those currently being worked on or planned.

Department of Economic Development

Accomplishments

Toolbox

The Workforce Investment Act requires case management system to track workforce development (job training and job obtainment) services provided by the Missouri Division of Workforce Development and its partners. In addition, with the merger of the DOLIR Division of Employment Services and the DED Division of Job Training to create the Division of Workforce Development, it was evident that a number of legacy systems would have to be merged together or integrated. Each division had their own information system. The Division of Job Training relied on the Job Training Information System. The Division of Employment Services relied on Americas Workforce Systems and Missouri Works!

The initial modules of Toolbox were developed to implement Workforce Investment Act requirements and to replace the Job Training Information System. Toolbox is tightly integrated with Missouri Works! and is targeted to replace most of the Americas Workforce System within the next year. The integration between Missouri Works! and Toolbox allows the Division of Workforce Development to capture customer information through the Internet reducing workload and cycle time.

Toolbox is a web-enabled application that is currently utilized by more than 900 staff and partners at more than 200 locations. More than 63,000 clients are currently in the system.

Customer Management System (CMS)

The department's vision is "to make Missouri the best place to live, work, vacation and conduct business." The department has developed outcomes that are aligned with this vision and the 25 "Show Me Results" established by Governor Carnahan. To track those outcomes and to continually improve on those outcomes, it has become evident that a robust customer tracking system is required that allows the department to track customers and products across multiple work groups. Work began on CMS in August of 2000. The targeted implementation for the first module is the first quarter of 2001.

Motor Carrier Imaging System

Currently, the division's Registration, Audit, and Research Section handles approximately 52,000 pieces of paper each year. The Interstate Commerce Commission Transfer Act of 1995 will replace the current Single State Registration System with a single federal on-line system in conjunction with the Financial Responsibility Information System and the Federal Registration System. It appears that the new system will be operated by the states. This new system will encompass all private and interstate exempt carriers, in addition to currently regulated interstate carriers. Therefore, the division will be registering approximately 7,000 additional carriers and processing an estimated additional 91,000 pieces of paper each year. By implementing a document imaging system (i.e., paperless system) for the registration process, the division will be able to reduce the cost and time to register motor carriers and will be able to register the additional private and interstate exempt carriers without the addition of any FTE's.

The document imaging system will, most importantly, provide faster and more accurate customer service with the following benefits:

- allow simultaneous review of applications by different sections,
- reduce processing time of application, registration, and insurance records,
- eliminate filing,
- provide faster retrieval of registration information,
- allow faxing directly from desktop computers,
- eliminate some data entry work,
- integrated information between the imaging system, a cash receipts system and the motor carrier mainframe system, and
- a workflow process that moves activity between sections for action.

In addition, the system will improve the division's record management by decreasing the number of copies made in the Registration, Audit, and Research Section, thereby, saving money on the purchasing and storage of large amounts of paper.

With the exclusion of some detail testing and some minor programming fixes, the project was completed by July 1, 2000. Testing has continued and it is anticipated that the system will be in full production after January 1, 2001.

Professional Registration Licensing System

The Division of Professional Registration must be able to efficiently and effectively process a large amount of data involved in the regulation of Missouri's licensed professionals. Prior to September 1, 1999 these tasks were handled by a mainframe system that was more than eighteen years old. The manner in which the system processed information was inefficient and in many ways ineffective. The system was in great need of replacement to allow the Division of Professional Registration to provide timely, consistent and higher quality responses to the licensees. This new system would allow for increased standards of regulation for over 250,000 Missourians that the Boards regulate. It would also service licensees and the public with a faster turn around on license renewals, applications, and the over 800 annual public information and walk-in

renewal requests. The new licensing system went into production on September 27, 1999.

An imaging piece is the second phase of this project. The imaging system will reduce file space, reduce data entry and improve cycle time. The imaging system will be implemented during the first half of 2001.

Public Service Commission

The Missouri Public Service Commission (PSC) is in the process of developing and implementing a state-of-the-art Automated Solution. The Automated Solution will provide the PSC with an integrated electronic work management system that will include technologies such as document management, automated workflow, electronic filing, centralized data, full text search capability of all public information and be web-enabled. The accessibility through the Internet will make more information available to the public, regulated utilities and stakeholders, as well as support high standards for productivity and consumer service. The positive impacts of this project on Missouri residents, regulated utilities, stakeholders and the PSC is to reduce cost of doing business with the PSC, ensure safe and reliable services and handle increase caseload without inflating workforce.

RFP No. B900686 was awarded on December 23, 1999 to Gulf Computers, Inc. The PSC and Gulf Computers are currently working on the development of the Automated Solution prototype. Testing of the prototype is scheduled to start February 2001, and will be followed by final design, system testing, internal and external training with full implementation to occur fourth quarter 2001. Technologies to be utilized in the system include FileNET's Panagon 4.1 eProcess, Workflow services, IDM Web services, Imaging services, MSSQL, DataCap OCR/ICR and Excalibur's Intelligent Search solutions.

Planned Projects

On-Line Renewals

The current process for renewing licenses with the Division of Professional Registration is labor intensive and slow. Renewal forms are sent to licensed professionals through the postal service. Once received, the licensed professional completes the form and returns it to the Division of Professional Registration where the form is reviewed, the information is entered into the licensing system and a license is issued. This system will allow licensed professionals to renew their licenses via the Internet eliminating a number of steps from the process and reducing cycle time.

Based on preliminary information it is estimated that 98,088 licensed professionals would use the online renewals with an estimated state savings of $98,088 and customer savings of $980,880.

On-Line Grant Applications

The department administers a number of grants and loans. The department intends to allow citizens to apply for these grants and loans via the Internet. Doing so will streamline a number of the department's processes reducing cycle time and process cost. In addition, these systems will increase availability and reduce costs for applicants.

These projects are in the very initial stages. No cost and benefit estimates are available at this time.

On-Line Tax Credit Applications

The department administers more than 50 tax credit programs. The department intends to allow citizens to apply for tax credits via the Internet. Doing so will streamline a number of the department's processes reducing cycle time and process cost. In addition, these systems will increase availability and reduce costs for applicants.

These projects are in the very initial stages. No cost and benefit estimates are available at this time.

Accumulated Demand

National Site Selection Database System

A standard data set is being developed on the national level that is intended to assist organizations with the site selection process. The intention is to have this data set available on the Internet.

Internet Processes and Internet Marketing

Demand exists to push more and more of the department's processes to the Internet. Likewise, demand exists to further develop the department's Internet sites to enhance the department's marketing efforts.

As the speed of business increases so does the demand for the deployment of these sites. Likewise, there is significant pressure to continually shrink the amount of time between articulation of the initial concept to full deployment.

Dept. of Elementary and Secondary Education

Overview

The Department of Elementary and Secondary Education (DESE) is in the fifth year of a seven-year plan to transition all information systems to state-of-the-art technology that will enable Missouri school districts to interact with the department through World Wide Web applications. DESE has utilized the web for nearly four years with the Federal Grants Application system and have expanded the web-based systems into other DESE divisions. These systems have been shown to greatly reduce the amount of paper flow from school districts, reduce administrative at the districts, reduce response time from DESE to the districts, and provide for reallocation of department administrative staff to technical assistance for the districts. DESE has experienced an increase in overall customer satisfaction as well from this transition project.

Accomplishments

Grants

DESE has continued its efforts in the development of web-based applications in the grant program area. The following provides an outline of some of the work accomplished in 2000.

SAMII Finance

Work was completed to provide compliance with and reporting from the Statewide Financial system.

SAM II HR

Provided compliance and integration with the Statewide Human Resources and Payroll system. In addition, reports were developed for use against data on the warehouse.

Perkins Budget and FER

This is a web-based system to replace the current paper based process for institutions to estimate the budgeted amount and final expenditure amounts. This system decreases the amount of time needed for an institution to submit this information and ensures that the department receives budgets promptly.

School Finance Automation

This project streamlines school payments into a single Payment Management system and reduces the number of applications still running on a VSE mainframe system in an effort to move from that mainframe to a client/server environment.

School Foods Automation

This is a web-based system to replace the current paper based process. Other state's applications were reviewed for possible use and Tennessee had a system that was accepted as a template. This includes an application and claim process. This system helps with verification of data and edits in compliance with USDA rules as well as speeding up the time in which payments can be made. Work is continuing on this application and should conclude by end of fiscal year.

Other Web Application Projects

DESE has a number of other web development projects that have been completed this year. Automation of the Gifted grant program's application process was moved into production and utilized for the first time this year. DESE IT also completed development of the application process of the TAG/Video program for the Division of Instruction and the Early Childhood program for the Division of Special Education.

Network

In the DESE network area we upgraded to a Gigabit Ethernet backbone. This will help to improve network response and performance for staff and public. DESE also upgraded to Windows 2000 for both server and desktop providing a standard configuration throughout the department. DESE IT is working with Lottery to provide real-time audio and video over the Internet. This will provide the public with the opportunity to see and hear events without being present. Earlier this year the network group implemented a DESE Intranet. The intranet provides staff with valuable information online and helps to reduce phone calls and paper handouts.

Planned Projects

Perkins Application

This project will help to reduce, from approximately 40 pages to 3 pages, the process to apply for a Perkins Grant. The system gathers the information via the Web that will increase the speed for data collection and it will allow for future reporting.

Perkins Allocation

The allocation project will automate the process used to determine allocation of monies for distribution in the Perkins Grant. This process is currently very manual intensive.

Special Education - Payments

Projects will be underway to provide the payment function to already developed web applications for the Division of Special Education. The addition of this function will complete the entire grant process from initial application for funds through payment. This process has already been completed in other grant systems.

Grants System

DESE has received interest from other states in reviewing the grants web application for possible use in their departments. DESE is in the process of developing a one-day session that would allow those interested states to come to Missouri for a business and technical overview of the system. This is planned for the January-February 2001 timeframe.

DESE has also been working with CBHE to determine if the grants system would be useable for their grant programs. Initial reviews look positive and both departments are continuing to determine how we can utilize work already completed in support of CBHE grant programs.

Network

On the network side DESE will begin implementing a new single point-of-contact help desk system. This system will be used to funnel requests, software development, maintenance, database, and networking, to a single point for automatic distribution to the appropriate staff for follow-up. DESE also plans to expand the Intranet to provide better customer service. We also look to provide connectivity to out-state DESE entities using VPN technology.

Accumulated Demand

DESE has a number of projects prioritized for future work. We are looking to provide customized training for the Division of Vocational and Adult Education in conjunction with Economic Development. We will also be providing the payment functionality to many of our web applications such as the gifted program. Our Division of Vocational and Adult Education have a number of grant programs being reviewed for possible web development. There are approximately 245 programs in DESE that must be reviewed for possible automation.

An additional process to the current School Foods project, School Foods commodities is being reviewed and planned for future development.

DESE IT is looking to analyze and transform existing mainframe reporting systems and reports to a new reporting data store. Some progress has been made but much more work is required in the future. The main emphasis will be to move any remaining mainframe systems into the new technical environment.

Department of Health

Accomplishments

MOHSAIC

During 2000, the MO Department of Health (DOH) continued its progress on developing and implementing a statewide-integrated public health system (MOHSAIC). MOHSAIC achievements in 2000 include:

- Implementation of an enhanced version of the Health Management module of MOHSAIC which included additional data for the immunization and family planning programs and enhanced the reporting of data from private providers.
- A new module was implemented for the Child Care Workers' Registry. This module provides on-line access to Department of Social Services child abuse and neglect data and the Highway Patrol's criminal history data. The system will allow parents and owners of childcare facilities to check on a child care worker's criminal or abuse history with a single telephone call.
- The data warehouse was expanded to include all new data collected in MOHSAIC.

Women, Infants and Children Nutrition Program (WIC)

The Women, Infants and Children Nutrition Program (WIC) implemented a banking system. Formerly, WIC clients gave the grocer a voucher for their purchase. The grocer had to send the voucher to the state to get paid causing several weeks delay in their payment. Under the new system, the WIC clients pay for the food with an immediately negotiable check.

Bioterrorism Security

DOH installed new technology in the local public health agencies throughout the state to improve communication and to enable the state to respond more quickly to potential health crisis, including bioterrorism attacks. DOH installed secure e-mail, Internet access, and streaming video capabilities in all public health agencies. DOH also installed

video conferencing capabilities in the state's three metropolitan areas as well as the DOH central office.

MOHSAIC Communicable Disease Module

DOH applied for and received a grant from the Centers for Disease Control. Funds from the grant will be used to improve the state's ability to prevent the spread of communicable diseases. The grant funds will be used to develop a secure web interface to the MOHSAIC communicable disease module so that private providers can enter reportable diseases on-line. The money will also be used to implement a secure data exchange with hospitals and laboratories for the transmission of reportable disease data and to improve data reporting through additions to the data warehouse and expanded use of Geographical Information Systems (GIS).

Planned Projects

- In 2001, DOH will expand MOHSAIC to include at least the following: service coordination, lead screening, childcare safety and licensing, and a web-enabled surveillance system.
- The data warehouse will be expanded to include the additional data being entered into MOHSAIC.
- A Public Key Infrastructure (PKI) will be implemented to ensure the security of health data transmitted over public networks.
- DOH will implement a document imaging system. The first application for the imaging system with be birth and death certificates. This will not only assist with the retrieval of the certificates but also preserve them as the older documents are deteriorating.
- A web-enable newborn hearing screening and neonatal testing system will be implemented. The system will allow hospitals and audiologist to enter required newborn testing data on-line.
- A web-enabled summer food program will be implemented to pay for lunches for needy children in child care facilities during the summer months.
- DOH will expand GIS reporting for data located in the data warehouse.

Accumulated Demand

The following projects have been requested but are not on the schedule because of a lack of resources or incomplete information:

- Addition of the following programs to MOHSAIC: WIC, environmental health, cancer control, and some health inspections programs.
- A web-enabled vital records system that would allow hospitals to enter new birth information and funeral home directors to enter death information over the Internet.

- Conversion of the vital records database from IDMS to either Oracle or DB2.
- DOH will be required to implement new security requirements and data standards specified in the new HIPPA regulations.

Missouri State Highway Patrol

Accomplishments

Cooperative Network

The Missouri State Highway Patrol, in cooperation with the Office of the State Courts Administrator and the Department of Social Services, has implemented a Cooperative Network. This project established a single telecommunications network in each county in the state where participating agencies were co-located. The telecommunication circuit allows local governmental agencies access to state applications such as Missouri Automated Child Support System, MACSS, Courts' case management system, Banner, and the Missouri Uniform Law Enforcement System, (MULES). The system provides uninterrupted 24-hour availability.

The Cooperative Network is an excellent example of agencies cooperating to provide critical connectivity to local governmental agencies by providing improved services at less cost. The implementation of frame relay, utilizing the consolidated network saved the state approximately 2/3rds of the cost if each agency had implemented their own network. The Missouri State Highway Patrol administers the network on behalf of the participating agencies through a formal memorandum of understanding. The participating agencies have sought in the past and will seek again appropriations to fully fund the state's telecommunication network. The appropriation request will be $1,378,000 and will grow at an approximate rate of 15% annually until all customers requiring connectivity are connected.

Notebook Computers in Patrol Cars

The Missouri State Highway Patrol continued an operational program equipping each of its vehicles with notebook computers. The notebook computers demonstrated increased enforcement personnel productivity providing access to critical information needed for enforcement decisions. The Patrol Proof of Concept project was to outfit 18 vehicles this year to collect data on productivity and safety improvements. Eighteen Panasonic notebooks have been purchased as well as all related hardware (i.e. docking stations, cables, modems, antennas, etc.). Vehicles assigned for the pilot have been prepared for installation. Integration testing by the respective vendors, IBM Houston, PST, and Logisys has been completed. Integration testing at the Patrol is scheduled for late

November 2000, with operational implementation scheduled by calendar year end. Assuming the expected productivity and safety improvements are realized, the plans are to outfit the Patrol's entire fleet of enforcement vehicles.

AS/400 Upgrade

The Missouri State Highway Patrol relies heavily upon the AS/400 platform for office productivity performing such critical functions as e-mail, calendar and document management. The Arrest/Incident/Investigation System and the Crime Lab Evidence Management System are two examples critical to the Patrol's criminal investigation operation. The MSHP upgrade consisted of expanding the available disk space, upgrading existing mid-range AS/400 computer software and replacing obsolete non-intelligent desktop devices. The upgrade was completed in 2000.

National Sex Offender Registration

The Missouri State Highway Patrol serves as the central repository of Missouri's Criminal History Record Information (CHRI). The central repository concept was very informal until 1984 when Missouri became a sole source contributor of CHRI to the FBI. Although recognized at the federal level as the central repository, the Missouri General Assembly did not mandate state recognition until 1986 passage of Missouri's CHRI reporting legislation. At that time the Missouri Central Record Repository (MCRR) was established and the Patrol's Criminal Records and Identification Division (MSHP/CRID) was designated the MCRR.

The Patrol, as the MCRR, requested federal funding support through the U.S. Department of Justice, Bureau of Justice Statistics National Sex Offender Registry Assistance Program. These funds are to enhance the capabilities already present in the State of Missouri and establish participation in the national sex offender registry providing instant access to data on interstate sex offender location.

Since the implementation of automation within the MSHP there has been a concerted effort to develop effective criminal justice applications designed to improve the facilities available to criminal justice agencies. The capabilities of the National Sex Offender Registration system, being developed are scheduled for implementation in February of 2001,and will integrate with the applications in place at the MSHP today. The existing applications, described below, along with the National Sex Offender Registration System are for use by the criminal justice community across the state and nation.

- ***Automated Criminal History Records System:*** An automated criminal history records system, CHRS, has been developed and is maintained by the MSHP Criminal Records and Identification Division. The system maintains data for all reportable segments of the criminal justice cycle, i.e., arrest, prosecution, adjudication, sentencing, and incarceration. All criminal justice agencies are afforded access to the system through the Criminal Justice Telecommunications Network managed by the MSHP.

- ***Interstate Identification Index Participant:*** Missouri became a participant in the National Crime Information Center's (NCIC) Interstate Identification Index (III) in 1984. MSHP assumed responsibility for all Missouri criminal records established since that date.
- ***AFIS Installation:*** In 1989, the MSHP installed an automated fingerprint identification system (AFIS), in joining the ranks of approximately 20 other states utilizing an AFIS system. Missouri took another step forward in improving the state's capabilities in the early detection and apprehension of offenders. With this installation, Missouri is currently developing an integrated interface between AFIS and CHRS, two independent and self-sufficient applications. The integration will enhance the operational efficiency and integrity of both applications while providing a tremendous identification and investigative aid to criminal justice agencies throughout Missouri.
- ***Missouri Uniform Law Enforcement System:*** The Missouri Uniform Law Enforcement System (MULES) contains the "hot files" for Missouri. Hot files include stolen property, wanted persons, missing persons, etc. MULES has a direct connection to the CHRS. Local criminal justice agencies have access to these files through the MULES telecommunications network. MULES will be connected to the NCIC 2000 project

Racial Profiling

On June 5, 2000 the Governor signed into law a requirement for all Missouri peace officers to capture certain information concerning each motor vehicle stop, including the racial identity of the person stopped, the alleged violations, the circumstances surrounding any resulting search, and whether any arrest was made. With the signing of this law, each law enforcement agency was required to review reports of its officers to determine whether any individual officer was making disproportionate stops of minority groups. The law required the Missouri State Highway Patrol to begin compiling racial profiling information effective August 28, 2000, and provide reports to the Attorney General by the first of March every year. The law specifically states what data were to be collected and reported on every contact (stop) made by the Patrol.

At that time, the Patrol had three application systems collecting some data required by this legislation. The first application (HP55) collected data on warnings issued and calls for service, the second (CJ32) collected arrest data from the Uniform Complaint and Summons, and the third (CJ04) collected drug-related arrest and search/seizure data. Additionally, reports from two application systems (CJ90 and CJ92) summarized of all Patrol stops. The reporting forms utilized by the field officer were not designed with the legislated requirements in mind and, as such, did not provide input for all the required elements to be reported to the Attorney General.

Due to the volume of data entities required to be collected, the amount of time required by the enforcement personnel to enter and forward the data, and the out-of-date technology being utilized, it was deemed necessary that collection and reporting aspects of the legislated requirement be analyzed and a recommendation made.

One of the applications (HP55) collecting data utilizes Optical Character Recognition (OCR) data collection forms which, when compiled, are sent out-of-state for scanning into an electronic format. Once produced, the electronic formatted data are sent back to the Patrol and used as input to the application system. The technology involved was several years old, the turn-around time lengthy, and the process had a very high rejection rate (approximately 14% of forms scanned). This application most closely resembles the intent of the legislation because it had a number of the attributes required and the substantial volume of forms involved. As such, it was targeted for re-engineering to meet requirements of the legislation. To increase productivity the re-engineering consisted of either re-design of the out-dated data entry technology or designing an application utilizing personal display assistant hand-held technology (PDA) to improve the efficiency, timeliness, and accuracy of the reporting. PDA technology now typically is implemented on hand-held Palm devices.

PDA technology was selected because it integrates well and is consistent with the Mobile Computing Device initiative, which began at the Patrol in 1997. Palm devices will allow officers to create reporting media on the spot with assured accuracy in less time. This technology has been piloted in New York State with the Probation and Parole Division. The pilot was successful and the palm technology is being expanded throughout the NY Probation and Parole Division.

The MSHP submitted the appropriate fiscal notes for the technology, which was subsequently approved. A fiscal year 2001 supplemental decision item was requested along with a fiscal 2002 decision item. When approved the funding will allow the MSHP to have this technology available for reporting mandated racial profiling data to the Attorney General.

Department of Health MULES Interface

Background information on certain childcare workers, elder care workers, and providers is consolidated and made available through the Family Care Safety Act. Child care and elder care workers are those employed by a provider, as defined in legislation enacted in 1999, or those independently hired to provide care who receive at least part of their salary from public funds. Certain summer camps, voluntary associations, and family members providing care for an immediate family member are exempted from the provisions of the bill.

By January 1, 2001, the Department of Health was to establish and make available information on child care and elder care workers, and childcare and elder care providers through a Family Care Safety Registry and Access Line. Persons employed on or after January 1, 2001 have to register within 15 days of beginning employment. Those employed by providers currently required by state law to conduct criminal background checks may submit the registration form and employer verification that such a check has been requested and received. For employees who are registered with the registry, employers may access the registry in lieu of conducting the required background check. Childcare or elder care workers failing to register with the Family Care Safety Registry, without good cause as determined by the department, are guilty of a class B

misdemeanor. Others not required by the provisions of the bill to register may voluntarily do so.

The legislative mandate necessitated the need for Department of Health to have an interface with the Missouri State Highway Patrol to check background information for convictions, pleas of guilty or nolo contendere, or suspended execution of sentence to certain specified felonies.

The MSHP Information Systems Division established interfaces allowing on-line access to data for the background checks. These processes were designed, tested, and implemented in a joint effort by the Department of Health and the MSHP.

Patrol Accident Form Phase I

The Patrol, to provide field officers with resources to make the officers more efficient and productive, piloted and subsequently implemented an automated Accident Form, complete with accident reconstruction software. This application and associated hardware and supporting software was implemented in 2000.

State Data Center Consolidation

In the year 2000 the MSHP consolidated it's mainframe operations with the Office of Administration's (OA) State Data Center (SDC). This project was a part of the overall statewide incentive initiated by Governor Mel Carnahan to streamline state government. The consolidation involved transfer of mainframe capabilities and hardware in the operational functioning from the MSHP to the SDC operational environment. The MSHP also transferred personnel to assist with the transition and ongoing operations.

This joint effort of the MSHP and SDC included changing Job Control Language (JCL), printing procedures and printer Ids, renaming of procedures, scheduling of jobs, and transferring of computer operations support and responsibilities from the Patrol to the SDC.

Statewide Advantage for Missouri II Human Resources

The implementation of the new statewide accounting system required the acquisition, configuration, testing, and installation of 64 personal computers within the Patrol's organization. Personal computers provide Patrol employees access into the enhanced accounting, budget and inventory functionality of the SAM II system allowing the Patrol to inquire on and produce contract releases and purchase orders. The deployment of the project was geographically statewide in nature. The Patrol was one of the first agencies to convert to the bi-monthly pay period when the new Human Resources module of the Statewide Advantage for Missouri was implemented. The ISD worked with the Office of Administration and the Patrol HR personnel to make this transition as seamless as possible while maintaining operational checks and balances.

Highway Safety Project

The Patrol's Information Systems Division's Statistical Analysis Center (SAC) had significant achievements in their activities associated with the 2000 grant. The SAC between October 1, 1999 and September 30, 2000 accomplished the following activities:

- ***Highway Safety Plan Development*** – Assistance was provided to the Missouri Division of Highway Safety (MDHS) in development and implementation of the Missouri Highway Safety Plan (HSP). The work included conducting analyses to support 2000 / 2001 HSP planning through evaluation of policies and programs being considered for adoption in the HSP.
- ***Highway Safety Program Implementation and Evaluation –*** Analytical and information services were provided to the MDHS to support implementation of countermeasure programs contained in the HSP or as specified by the agency.
- ***Highway Safety Applicant Support –*** Analytical and information services were provided to agencies for various types of grant supported traffic safety projects sponsored by MDHS.
- ***State and Local Information and Research Service Support –*** Assistance was provided to MDHS and the MSHP in supplying information and analytical services to other Federal, State, and local traffic authorities.
- ***Highway Engineering Location Analysis Support –*** Assistance was provided on highway statistics for various types of crashes in specific parts of Missouri for multiple time periods.
- ***STARS Maintenance –*** Operational support, quality control and system support, was provided to the Statewide Traffic Accident Reporting System (STARS), including maintaining the HSRI / STARS (Highway Safety Research Institute) terminal interface with the University of Michigan Transportation Research Institute (UMTRI).

Frame Relay Project

The ISD completed the conversion from analog data circuits to frame relay topology for the consolidated network. This multiple year project involved the swapping of circuits and routers in virtually every county of the state. There are 400 data circuits making up the converted network. The completion of this project made possible the consolidated Criminal Justice Network started in 1998. The network allows criminal justice agencies to share resources between the Department of Social Services, Office of State Courts Administrator, and MULES agencies.

Uniform Crime Reporting

ISD completed the hosting of WEB applications to allow Missouri law enforcement agencies to enter and store crime data. This application was mandated by the 99th general assembly and signed into law in 2000 by Governor Carnahan. Prior to this legislation Missouri was one of only two states not able to report summary crime statistics to the FBI. This application will provide a central repository to collect, collate, analyze and report on summary crime statistics as provided by the reporting law enforcement agencies. The Patrol will oversee the training of local, county and state law enforcement

agency crime analysts and data clerks in the proper classification and reporting of the incidences of crime that take place in their respective jurisdictions.

Lotus Notes Application Platform Hosting of HR - Drug and Crime Control

ISD, in an effort to automate the functions and integrate data with the Division of Human Resources, completed phase I of a three phase project. Phase I was implemented in conjunction with SAM II phase II, which included the automation of HRD functions following transition of HR/Payroll to SAM II. A series of Lotus Notes applications were developed and implemented in support of Human Resource functions not addressed by SAM II. The Notes modules extract common data from SAM II to eliminate duplication of effort, as well as facilitate workflow and integration with e-mail and other Patrol legacy applications. An internal HR/Payroll data warehouse facilitates agency-wide reporting requirements, including ad-hoc reporting, and utilizes information extracted from both SAM II and HR Notes data.

Project Management

In keeping with the stated direction of the Office of Information Technology's and Office of Administration's Division of Budget and Planning, MSHP ISD has implemented project management as the management tool to oversee and control MSHP information technology projects. In the year 2000 nine members of the ISD management staff received formal project management training. This training was provided by Boston University in accordance with the Project Management Institutes' guidelines. All MSHP ISD projects are currently managed using principles provided by this training. Additionally, these nine staff members have joined the local PMI chapter to stay current with project management developments.

Planned Projects

Uniform Crime Reporting

As stated in the 2000 State of the State accomplishments, this application is to provide a central repository to collect, collate, analyze and report on summary crime statistics as provided by the reporting law enforcement agencies was mandated by the 99th general assembly and signed into law by Governor Carnahan. In the year 2001, the Highway Patrol's ISD will be providing reports development and help desk operational support to Missouri law enforcement agencies as they begin to code and enter crime data. There are an anticipated increased number of 450 personal computers inputting data in 2001.

The repository functions of Phase II are scheduled to be implemented during 2001. This phase is dependent upon acceptance by the FBI of the state repository UCR data and acceptance by Missouri local law enforcement agencies to report to the state repository.

Patrol Accident Form Phase I - Zone Office Rollout

This application and associated hardware and supporting software was implemented in 2000 and will be rolled out to the Patrol's Zone Offices in 2001. The application system, coupled with automated Accident Form and complete with accident reconstruction software, will provide field officers with resources to make them more efficient and productive.

MCD /Wireless Project

This program provides law enforcement agencies across Missouri with ready access to MSHP repository programs containing; criminal history records; automated searches of criminal fingerprints; missing and wanted persons; state wide traffic accidents, traffic arrests, Orders of Protection, alcohol and drug offenders reporting. The project is a joint endeavor of the MSHP, IBM, Public Sector Technologies, and LOGISYS.

The Patrol operates a voice radio communication system that has exceeded its saturation level for the amount of voice traffic required to support enforcement activities in the field. To compensate, officers now have to wait an extraordinary amount of time to access the radio system in order to run necessary licensing and wanted checks through the MULES system. In an increasing number of instances an officer will simply not request a records check because it takes too long to gain radio recognition due to traffic and by the time access can be gained the particular event triggering the need for the check has passed. Were the check to be run, the response would be received too late for the officer to take action. Wait time for the officer to access the radio have reached up to four minutes in the more populated areas of the state where traffic is the heaviest.

This particular situation creates a number of problems. Enforcement effectiveness is affected due to an inability to obtain access to important information effecting enforcement decisions. Officer safety is compromised in that officers may encounter dangerous individuals or circumstances without the benefit of information that could make a difference in their actions. Warrant entries are not being "hit" as the inquiry can't be made. Finally, officers who wait for access to the radio system effectively suffer down time for the period that they are simply waiting which has the effect of reducing enforcement availability and subsequently activity.

Specifically, this project addresses the installation of mobile computing devices, cellular modems and antenna's, and automated forms software in patrol cars. The officers utilizing this technology will be directly connected to MULES via cellular digital packet data (CDPD) technology allowing direct and immediate access. The automated forms software will permit the collection of data at the source for such forms as the uniform complaint and summons, the traffic accident form, the officer activity form and the criminal incident form. The number of vehicles that can be equipped with the technology is dependent upon the CDPD coverage area. The rate of expansion of CDPD coverage needs to progress such that over the ensuing years coverage will grow to accommodate all patrol vehicles.

This program is to improve officer productivity by permitting direct, timely access to important information. Improvement of officer safety will be a major goal. Another goal is reduction in radio voice communication, thus reducing the saturation level and permitting access for critical communications where voice is a must.

Accumulated Demand

The Information Systems Division of the Missouri State Highway Patrol has 182 projects identified for development, integration, implementation and testing. There are 51 of these projects that have been assigned priorities, many of which do not have planned completion dates. Some of this accumulated demand includes integration of technologies, such as Automated Fingerprint Identification System with the Computerized Criminal History System and Visual Info with the Interstate Automated Fingerprint Identification System. Additionally, there are several infrastructure projects like software conversion of legacy systems to new technology to off set ever increasing software and utilization costs plus security systems. The demand for IT within the MSHP is far greater than the available resources and is likely to continue for the foreseeable future.

Department of Insurance

Overview

The mission of the Information Services section of the Missouri Department of Insurance is to develop and establish procedures, rules, policies, systems and services related to computer and other technologies that help satisfy the critical achievement requirements of Information Services customers throughout the department. Furthermore, Information Services must fulfill the traditional data processing mission of providing a dependable, efficient and secure computing and communication infrastructure; acting as stewards for the department's data and information resources.

The MDI's Information Services section supports the department's core business and regulatory functions and consists of mainframe and mini computers, local-area networks, wide-area networks and approximately 200 personal computers (PCs). Mainframe computer resources are provided and maintained by the State Data Center (SDC). The SDC-managed mainframe hosts several significant software applications including MDI's Premium Tax system and mandatory insurance company filing and reporting systems.

MDI's primary information system resides on a client/server system running Windows NT and the Oracle database suite. This system consists of insurance agent and broker licensing modules, company licensing and monitoring modules, and consumer complaint and information modules. Personal computers are an integral part of the MDI network and are used for a wide variety of personal productivity and automation activities such as word processing, data analysis, and provide the gateway to locally networked, mainframe and Internet applications.

With the Year 2000 conversion successfully completed, MDI's Information Services staff was able to undertake several noteworthy projects.

Accomplishments

Information Infrastructure

- ***Network Upgrade*** - In conjunction with MDI's move to the 5th floor of the Harry S Truman building, network cabling and supporting switch-gear was migrated to Fast Ethernet and Gigabit Ethernet standards providing a reliable, high speed data pathway.
- ***Data Storage Upgrades*** - The I.S. staff installed new direct access storage devices on MDI's network to support the department's growing need for data storage and analysis. Of particular note was the installation of two high-volume, low cost SNAP storage servers supporting Managed Care and Statistical data.
- ***Oracle/MIDS Upgrade*** - MIDS, the "Missouri Insurance Department System", MDI's primary licensing and tracking system is an Oracle-based application. The underlying Oracle database management software was upgraded to current releases during 2000.
- ***Firewall/Security*** - The installation of a network security "firewall" facilitated modem elimination resulting in savings of over $2000.00 each month in telephone charges and improved security protection against network and Internet infiltration.

New Systems/Software Implementation

- ***Document Imaging*** - This hardware and software provides automated workflow to assist in management of agent and broker licensing paper and electronic documents within the department; facilitating document retrieval, allowing file sharing, and reducing redundancy.
- ***SAM II - Accounting and Payroll*** - This effort included the implementation of the EDA database access client for custom reporting as well as coordination of the department's implementation activities.
- ***Lotus Notes*** - While the MDI has been a user of the Lotus Notes product for several years in support of national information exchanges, during 2000 the department converted all of its e-mail users to Lotus Notes. With the help of the State Data Center staff, MDI integrated its own Notes user-base into the SDC's taking advantage of economies of scale and centralized expertise.
- ***MS Office Suite*** - This project included product procurement, installation, information systems and user training and implementation to eliminate a variety of other word processing and spreadsheet products while standardizing the department's desktop environment.
- ***Anti-virus Defense*** - This important effort to safeguard the department's personal computer and server environment provided timely, "automatic" updating of the software as well as confidence that all processors are protected.

Information Technology Training

Recognizing the ever-changing requirements of information technologies and the impact of employee turnover on the department's information workers, the MDI invests regularly in education and training. During 2000, thirty-two MDI employees received training in

the use of Microsoft office products. Additionally, MDI Information Services employees obtained 952 hours of technical training during the year.

Internet Initiatives

Over the past several years, the Missouri Department of Insurance has created a very active and successful Internet presence, winning praise and recognition from several consumer advocate as well as industry sources. During 2000 the MDI staff published on its web site comprehensive Consumer Complaint data, Medicare Supplement information, Workers Compensation facts and insurance-company address information. Additionally, the department maintains on its web site automated employment and hearing postings and has begun to use on-line databases to manage related information.

Business Continuity Planning

- ***Backup & Recovery Procedures*** - The I.S. section completed documentation, implementation and testing of improved data backup and recovery procedures during 2000, including the start-up of a "standby" server. These procedures encompass MDI's primary data and licensing system, MIDS, as well as internal local area network and storage facilities.
- ***Contingency Plan*** - The success of Y2K preparedness activities brought to light the importance of general disaster preparedness throughout the department as well as the state. Motivated by the State Data Center's efforts in disaster preparedness, the I.S. staff is leading MDI's effort to establish a comprehensive Business Continuity Plan for the department.

Legislative Initiatives

- ***Agency Appointment*** - This action provides for the "automatic" appointment of agency employees when an insurance company designates an insurance agency as its agent. Programming challenges included identifying active agency employees, creating appointment transactions and relating them to the originating company as well as modifying billing processes.
- ***Credit Organization Appointments*** - Similar to the automatic agency appointment process, this action eliminated the need for employees of agencies that sell credit insurance only to obtain individual agent licenses. Credit-only organizations can obtain a license that covers all of the organization's reported employees.

Planned Projects

Internet Initiatives

- ***E-government*** - The purpose of this proposal is to Web-enable several MDI systems and processes in order to better serve Missouri citizens, Insurance companies and licensed Insurance Producers (Agents & Brokers). The 2001 plan calls for Web-enabling:

- ***Agent Information Lookup***
  This system will provide insurance agent and broker (producer) contact and license status information to the general public as well as Missouri insurance companies by way of the Internet. The scope of the project includes creating a database from license data for Internet access which, at a minimum, includes the following MIDS data fields: agent's name, address, telephone number, date licensed since, lines licensed to write, companies they write for, licensing status (active, suspended, terminated, revoked, etc).
- ***Workers Compensation Rates Lookup & Comparison***
  This system will provide competitive Workers Compensation rates for Missouri companies. The rates are provided as a service to the public. The scope of the project will be to develop a database which can be accessed via the Internet and be queried to locate the following types of information: worker's compensation rates for a given class code, company contact information, and high/low/average rate information.
- ***Medical Malpractice Forms Filing***
  The Missouri Department of Insurance requires reporting of all medical malpractice claims by insurance companies on a mandatory form. The scope of this project includes developing an interactive application that is accessible, with adequate security, by way of the Internet; allowing the medical malpractice form to be prepared and submitted to the Department on-line and subsequently be audited and transferred to the database.
- ***Premium Tax and Tax Credit Calculation & Filing***
  The Premium Tax system, which resides on a State Data Center mainframe computer, collects tax-related information from all insurance companies licensed to do business in Missouri. MDI staff verifies the tax return data and the system coordinates with the tax payments collected by the Department of Revenue. The scope of this will include developing an interactive yet secure application that is accessible using the Internet. It will allow all types of insurance companies to complete their premium tax forms on-line, including entering all premium tax credit information. On-line editing and verification will help ensure that the data entered is as correct as possible.

As we strive to continually improve site navigation and information offerings for the insurance industry, several other mandatory filing systems are being considered for Web deployment.

- ***Title Insurance Revision*** - The purpose of this legislation is to update and strengthen the Title Insurance section of the statutes. The legislation touches licensing and education requirements as well as tracking and reporting. This effort will require approximately 256 hours of I.S. staff time in analysis, design and documentation and approximately 800 hours of contract

programming. The result of this effort will be a more thorough yet streamlined Title Agent licensing system.

- ***Single Producer License*** - The purpose of this legislation is to combine insurance agent and broker licenses into a single insurance producer license for the purposes of licensing and regulation. From an I.S. perspective it will require 284 hours of analysis, design and documentation and approximately 560 hours of contract programming and development. The result of this effort will be a more efficient licensing process that meets national standards devised by the National Association of Insurance Commissioners and satisfies federal requirements outlined by Gramm-Leach-Bliley Financial Modernization Act.
- ***License Numbering Scheme*** - The purpose of this effort is to institute a standard numbering scheme for all producer licenses in Missouri that are independent of other identifiers, such as social security number, to better share data with other state and federal regulators. A prerequisite of this project is to thoroughly review and update all agent and broker *Social Security Number's* and move them to a "confidential" database field for restricted use. In total this effort will consume approximately 120 hours of I.S. staff time during the year.
- ***Mainframe Migration to Oracle*** - The MDI maintains several legacy systems in the State Data Center. These legacy systems were developed several years ago using the technology available at the time. Present computing methods have not only superceded the old, but also made the skills necessary to maintain the old systems rare and expensive. This project will migrate these systems to MDI's Oracle environment over the next couple of years and provide improved user interfaces as well as facilitate Web access.
- ***Lotus Notes Time & Attendance System*** - At the request of MDI's Human Resources office, the I.S. staff is exploring ways of automating data collection, verification and approval of SAM II-related time and attendance information utilizing the Lotus Notes database and workflow facilities. This effort is expected to require about 200 I.S. hours after initial developer training and should be the first of several productivity improvement initiatives developed and deployed within the MDI on the Notes platform.

Accumulated Demand (Backlog as of Dec., 2000)

		Approx. Hours	
	W/O's	I.S.	Contractor
Closed 2000 Work Orders	761		
Open Work Orders @ 12/28/00	162		
Current (30 days)	47	89	0
Past due (30-90 days)	61	705	0
Severely Past Due (over 90 days)	56	1300	0
Current I.S. Projects			
Internet Initiatives			
Agent Information Lookup		201	205
Workers' Compensation Lookup		86	83
Medical Malpractice Reporting		197	177
Premium Tax Filing		631	540
Legislative & Other Initiatives			
Title Insurance Revisions		256	800
Single Producer Licensing		284	560
License Numbering Scheme		80	0
Migrate Legacy Systems to Oracle		1332	1166
Lotus Notes: Time & Attendance		200	0
		5361	3531

Department of Labor and Industrial Relations

Overview

The Vision of the Department of Labor and Industrial Relations is to be the premier leader in fair administration and enforcement of state and federal laws relating to labor and industrial relations in order to provide the best possible environment for all who live and work in Missouri.

The Mission of the Department of Labor and Industrial Relations is to provide employees with safe and healthy workplaces and ensure economic security for all Missourians by promoting equal access to jobs, enforcing anti-discrimination laws, and awarding payment of compensation to those unemployed, injured at work and victims of crime.

During 2000 the Department of Labor and Industrial Relations continued its progress on developing systems, implementing procedures, and providing electronic processing for its customers. Listed below are Accomplishments, within Information Systems, for year 2000:

Accomplishments

State Data Center Consolidation

The Department of Labor and Industrial Relations has successfully completed the mainframe consolidation with the State Data Center. This endeavor required numerous hours of concentrated effort and coordination to complete. Information systems completed the consolidation on November 19, 2000.

Unemployment Insurance Initial Claims

The Department of Labor and Industrial Relations initiated the e-government process of accepting unemployment initial claims via the Internet on December 18, 2000. The successful implementation of this process allowed Missouri to be the first state to provide a "hands-off" process for filing initial claims. This process involved modification of legacy systems to provide integrated processing with the web.

Help Desk

The Department of Labor and Industrial Relations established a consolidated Help Desk to provide support for our internal customers. Tivoli software is being utilized for the management of problems. Since its inception in January 2000, the Help Desk has had 7203 problems reported with 7069 of those reported being successfully resolved to date. Installed Crystal Reports for report management of reported problems.

Outlook/Office 2000

The Department of Labor and Industrial Relations has completed the conversion of our desktop software to Microsoft Outlook/Office 2000. This endeavor entailed the conversion of some 1200 computers.

DB2 Database

The Department of Labor and Industrial Relations upgraded the current release of DB2, Version 5.1, to Version 6. Created new databases and subsystems in support of the new Tax System project. Installed DB2, server based, in support of Tivoli Help Desk.

E-Mail

The Department of Labor and Industrial Relations consolidated the e-mail system, utilizing multiple servers, into a centralized e-mail server for ease of maintenance and accountability.

Help Desk Survey

The Department of Labor and Industrial Relations has instituted a comprehensive user survey to ensure quality control and customer service remains efficient. This survey is electronically submitted via the e-mail system.

PC Applications

The Department of Labor and Industrial Relations constantly looks for ways to enhance current systems, develop new systems, and integrate new development with legacy systems for increased functionality. Some of our accomplishments in this area are:

- The development of a DOS batch program now permits the upload of quarterly wage data after a forced virus scan has been completed.
- Upgraded Fraud and Noncompliance Case Management system.
- Developed Bar-Coded Certified Mail and printing to single feed sheets on network printers.
- Developed reporting and notice processing for the new Performance Management system.
- Developed minority vendor reporting process utilizing existing SAM II files.

WEB Page Development

The Department of Labor and Industrial Relations has redesigned the Intranet and Internet home pages giving them a new look and feel that greatly increases our

customers' usability. The addition of an "ALERT" function on the Intranet provides our customers with immediate notification of potential problems and/or scheduled outages. Additional development includes:

- Inclusion of Labor Standards Annual Wage Orders on the Internet.
- Inclusion of Olmstead information on Governors Council on Disability Internet site.
- Addition of the strategic plan, quarterly and yearly, results on both the Intranet and Internet.
- Inclusion of departmental employment opportunities on both the Intranet and Internet.
- Addition of Survey of Occupational Injuries and Illnesses to the Internet.
- Addition of Performance Evaluation Manuals to the Intranet.
- Addition of Labor Management Conference information on the Internet.
- Inclusion of Office Rules section for Workers' Compensation offices on the Internet.

AS/400 Operations

The Department of Labor and Industrial Relations has made dramatic modifications to our current AS/400 computing environment. Some of the modifications and enhancements are:

- Physical relocation of the Workers Compensation AS/400 to 421 East Dunklin.
- Transfer of 128 platters, 9246 Optical Juke Box and System 36, to a new Optical Storage. This transfer involved over 140,000 images.
- Upgraded the operating system on the Employment Security AS/400 to Version 4, Release 4. Upgraded the Image product.
- Addition of DASD to both AS/400's. Total of 137 GB added to the Employment Security AS/400 and 119 GB to the Workers Compensation AS/400.
- Retired 3490 and 9337 tape drives.
- Implemented RJE transfer of Wage Data tapes from the AS/400 to the mainframe. Wage Data tapes can now be mounted and read at our local facility vice routing them to the State Data Center for processing. This improved processing time dramatically.
- Modifications completed to allow AS/400 communications to the Mainframe after the State Data Center consolidation.

Mainframe Applications

The Department of Labor and Industrial Relations maintains vast amounts of systems and associated programs. Constant modifications, enhancements, and process changes have been normal operating procedures. Specific actions, with regard to mainframe applications are:

- Programmatic modifications to convert local offices to a more centralized phone center have been completed. Modifications to required letters to reflect the change have been completed.
- Implemented a new audit system for Benefits Payment Control.
- The processing of wage records with tapes was streamlined to process the vast majority on the AS/400 vice the mainframe.
- Implemented programming to accept wage reports in an Excel format.
- Implemented programmatic modifications to indicate which monies were collected via the debt offset process.

AS/400 Applications

The Department of Labor and Industrial Relations maintains, and develops, numerous systems on the AS/400. Specific accomplishments are:

- Development of process for Proof of Coverage data through EDI. A total of 15 insurance carriers are now submitting POC data via EDI. EDI use has expanded for First Reports of Injury. Approximately 35% of all FROI are being received through EDI. There are 63,000 documents per year that do not require processing manually because of this enhanced process.
- Relocated AS/400 Applications development group to 421 East Dunklin.
- Implementation of a new GUI interface for the AICS systems. Over 2000 screens were developed to complete this project that involved the utilization of Seagull J Walk software.
- Implemented modifications to the Physical Rehabilitation Facilities module to accommodate business changes.
- Image processing continues enhancement.

Planned Projects

- Crime Victims' Compensation system.
- AICS Attorney Inquiry Module implementation.
- Information Systems web page for the Intranet.
- Automated forms processing with web enabled link to AS/400.
- Imaging needs assessment scheduled for department wide evaluation.
- AICS Self-Insurance Audit Module implementation.
- Possible mandate of EDI reporting for FROI. This would require all First Reports of Injury to be submitted electronically. This would increase electronic transmissions from 63,000 to 180,000 and would increase trading partners from 30 to 200+.
- Imaging project to move from Green Screen environment to the Visual Info GUI clients and an initial web implementation.
- Implement Continued Claims on the Internet.
- Implement Periphonics IVR.
- Complete modifications to allow users sections to delete/add/change wages within accounts online.

- Investigate Internet banking requirements.
- Convert programs from NAICS code to SIC for industrial statistics.
- Implement modifications necessary for enhanced image scanning to the AS/400.
- Implement off-site backups for AS/400.
- Upgrade operating system on Workers Compensation AS/400 to Version 4, Release 5.
- Upgrade Imaging Application to Version 4, Release 3 on both AS/400's.
- Add 3995 Optical Drives to both AS/400's to accommodate the growth of image applications.
- Investigate dual processing for the AS/400 to provide server based applications support while maintaining image applications separate.

Accumulated Demand

The demand for services is ever increasing. The Department of Labor and Industrial Relations strives to meet all requirements while continuing to provide quality products. Although some requirements may be of greater business importance, all processing requirements will be reviewed. At times the demand for service outweighs the ability of Information Systems to provide requested support. Business requirements, process improvements, and electronic procedures that enhance existing systems will be addressed as personnel availability allows.

Missouri Lottery Commission

Accomplishments

Lottery Numbers Game Enhancements

The Lottery initiated a 13-week 'temporary' online game, 100K Triple Play, to be played during the traditional slow sales months of summer. This game was programmed to be parameter driven so that same software can be used in the future to establish other opportunities for specific player bases. This game gave players a new and exciting way of winning $100,000.

ShowMe5/Paydown Game Change

The original Show Me 5 game was enhanced to provide higher payouts and more prize levels for players. The top prize was doubled to $50,000 tax paid while a 4th prize level was added for matching 2 of 5 numbers. In addition to these changes, all prize levels paid out are increased if the top prize is not won for that draw.

Pick3 and Pick4

Prize levels were increased for both of the Lottery's daily numbers games.

Check-a-Ticket (CAT) Program

CAT units are electronic 'extensions' of existing Lottery retail terminals. These devices are designed to be activated by players and are used by the players to check their ticket(s) for winner information after the numbers for that game are drawn. These devices provide a great convenience to both players and retailers by separating the ticket 'inquiry' function away from the higher traffic associated with the typical selling point. Research shows that sales are positively affected by the placement of these devices.

Automated Winning Numbers Posting and Player Notification

Draw numbers are entered through two separate operations consoles manually as a means of verification and to initiate the finalization of a game's drawing. These numbers are then manually entered into a number of public and lottery applications to facilitate the dissemination of this information. These manual entries had been prone to human error, so this process was completely automated so that the dual entry process sets off software

which automates the publishing of draw results to the WEB, player e-mails and internal databases. This ensures timely and accurate information to Lottery players, retailers, new media, etc.

Combined Accounting and Eliminated Paper Statements

Since the inception of the online gaming products (Pick3, Lotto, etc), retailers who sell both Scratcher and online games have been under separate accounting systems for the two products. This was due to the restrictions of the accounting weeks that were initially established by gaming vendors. In the past year, these two separate systems were replaced by a single system and the retailers were migrated to a common accounting week. This gave retailers immediate savings from the elimination of one of their weekly EFT sweep charges from their bank. This consolidation of statement information also provided the retailers with a single document for their accounting information. This accounting information was also made available to all retailers through their terminal devices in their stores. Providing retailers with electronic statements has been well received since it gives the retailers more time to transfer monies due to their EFT account. This has also saved the Lottery money since paper statements are no longer printed and mailed to 'independent' retailers.

Module M2 Software Migration/Disaster Recovery Site

In 1994 the Lottery initiated a bar-code system for validating prizes and tracking tickets within the Scratcher gaming product. This system was implemented on a separate computer from other Lottery systems due to the volume of transactions and the limited capacity of the Lottery's primary computer at the time of the implementation. In 1999, after Stratus had previously announced the end-of-life for the XA2000 series, the Lottery upgraded the primary computer to the Stratus Continuum series. This computer was sized with the idea that all Lottery mainframe applications would reside on the Continuum. In 2000 the validation system was moved from the R45 platform, purchased in 1994, to the new Continuum. All software development efforts and testing have been removed from the Continuum and are now performed on the older R45. This adds a level of integrity to the production environment by further removing software development staff. This also frees up the resources on the R45 so that this computer may be turned into a limited production disaster recovery platform. When this disaster recovery platform has been moved to the GTECH (online gaming vendor) primary site in early 2001, the Lottery will be in a better position to provide services to players and retailers with a minimum of interruptions in the event of a site disaster.

Time Reporting

Like a number of agencies with remote employees, the Lottery was concerned about the timely reporting of employee time sheets to OA using the new SAM II payroll system, with the twice-a-month pay-cycle. The Time and Attendance Tracking System (TATS) was designed to facilitate tracking of leave/overtime requests and to create time records for payroll reporting. This system was designed and incorporated with the Lottery's Intranet WEB site using an ORACLE database. When available, transactions from this system will be used to post to the SAM II payroll system.

Document Imaging System

A document imaging system was procured and imaging is being implemented in phases. The pilot phase for imaging has been the area of retailer licensing. This imaging system will provide customer service personnel with additional resources and timely information when dealing with retail customers. Future document imaging projects will include retailer accounting, prize claims and other applications that will enhance customer service to Lottery retailers, players and Missouri citizens.

General Ledger

A joint effort between the accounting and IT sections has been to replace the antiquated general ledger package that has been in use since the late 80's. The new system purchased has a number of features, including automated interfaces, which were previously unavailable. With this new G/L software package, accountants will be in a position to report financials and keep Lottery executive staff and commissioners better informed as to the status of the business. Automated interfaces will add yet another level of balancing and crosschecking to ensure the integrity of Lottery financials.

Planned Projects

FY02 WEB Initiatives

The Lottery is committed to providing extraordinary customer service to its players, retailers, legislature and other agencies. The Internet provides a channel which, when properly configured, allows state-of-the-art technologies to give the customers what they want, when they want it. The Lottery is interested in providing information, education and entertainment to citizens through the Internet. This is a robust environment that allows the Lottery to disseminate as well as collect information. There are many applications and small projects affiliated with this initiative, including e-business and e-commerce usage that will streamline business and provide quality service to our customers. WEB projects anticipated include:

- ***Redesign of overall 'look and feel' of Lottery Pages*** - We recognize that WEB presentation must remain fresh to keep the customer's attention.
- ***Winning Ticket Verification*** – This will allow players to check Scratcher and/or Online Numbers Game tickets to see if they are winners and also allow players to check their ticket results from home.
- ***Retailer Access*** - Provide for retailers to have access to all of their accounting, sales and prize payment information via the WEB as well as retailer application and licensing requests through the WEB or online via sales representative field terminals/devices.

Marketing Status Quo

Based on past experience with the diverse environment of the Lottery industry, it is both anticipated and expected that a number of system requirements both large and small will be required in the coming year. These systems can and will be as simple as changing

existing game matrixes to adding complete new products to the mix of Lottery offerings. These changes are inherently diverse and unpredictable as the Lottery industry is ever changing and reactionary to trends, legislation and marketplace.

Retailer Accounts Profile

This system will manage retailer POS inventory, supplies and consumables. It will incorporate information associated with retail licensing, retail accounting and sales information systems. Lottery field personnel, to better serve and recruit retailers, will use this system remotely. Part of this project will be the implementation of electronic connectivity of Lottery field personnel with Lottery back office systems and information.

General Ledger Completion

The general ledger automated interfaces will be addressed in the year 2001. This will include, but not be limited to, daily retailer accounting, prize redemption, vendor payments and fixed assets.

Accumulated Demand

There is currently a backlog of approximately 2.5 man-years of service requests and projects. The Lottery has experienced a 'regular' turnover of its junior staff positions in the past 3 years. This has prevented staff from addressing the backlog of requests and has forced management to prioritize and screen requests for mission critical applications. This turnover has also forced senior staff to spend more time training and acclimating junior staff to systems and architectures. Further compounding this situation, the Lottery will redirect one of the application development resources to work on WEB initiatives in the coming year. In addition, the Lottery has requested five (5) additional FTE and additional E&E monies for outside consultants to facilitate the WEB development effort so desperately needed to provide the services, promotions and information expected by players and retailers.

Department of Mental Health

Accomplishments

Y2K Conversion

Using internal staff and recent DMH retirees, DMH repaired several hundreds of programs and successfully entered the year 2000 with no significant disruptions.

SAM II Financial Data Warehouse

DMH moved a copy of all SAM II Data into the DMH Data Warehouse so financial data can be joined with data from consumer systems. During the year we published on our departmental Intranet, dozens of standard reports appropriate for our organization. Easy access to DMH data and to meaningful standard reports is vital to our accounting staff.

SAM II HR

OIS is working closely with the DMH SAM II planning group to prepare for SAM II HR. We currently have most of the technology infrastructure in place. In addition, we have procedures in place to copy SAM II HR data to our data warehouse. We are preparing a set of standard reports appropriate for our facilities and Central Office.

Local Area Network Improvements

We have been working with our 28 facilities to upgrade their LANs and to convert them to Ethernet. This improved infrastructure is a requirement for running SAM II and our future consumer information systems.

Windows 2000 Network Conversion

We have begun planning for the conversion to Windows 2000 as our network operating system. This project will be completed in the fall of 2001. This is a critical piece of our infrastructure. It will provide better reliability and manageability to our infrastructure as well as to our network administration and workstation support groups.

CLAS

The Certification and Licensure Tracking System (CLAS) is underway and will allow a single DMH system to track these activities for our Office of Quality Management, which

provides regulatory oversight for all DMH providers. This is a strategic requirement for the department. Implementation is planned for March 2001. This application was developed using Microsoft Visual Studio and MS SQL Server. It is delivered as a web application providing a real-time interactive system accessible from many locations.

SATOP

With development currently underway, the SATOP system will support a program in the Division of Alcohol and Drug Abuse. Implementation is scheduled for May 2001. This application was developed using Microsoft Visual Studio and MS SQL Server. It is delivered as a web application providing a real-time interactive system accessible from many locations.

Outcomes Web

The Outcomes Web is a pilot project for gathering outcomes data from contracted providers and delivering reports and comparative data to all system users. This is a strategic initiative for the department in an effort to improve quality and accountability. This application was developed using Microsoft Visual Studio and MS SQL Server. It is delivered as a web application providing a real-time interactive system accessible from many locations.

CIMOR

The Consumer Information Management, Outcomes, and Reporting system is a commercial application that is being customized to meet the full requirements for our core consumer system. This will replace all our legacy applications that deal with consumers, services, billing, and providers. The contract was awarded in September after a yearlong evaluation process. Currently, we are in the Implementation Planning phase. The system will go on-line statewide within two years. This system is the most vital information system initiative in the recent history of DMH and should provide improved accountability for all our work with consumers. The timeframe for implementation is critical in order to meet requirements of HIPAA. (See below.) The core of this application was developed in Microsoft Visual Studio and will employ MS SQL Server. We expect to deliver most of this application using web technologies.

HIPAA

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) is a federal act that will transform health data systems. New requirements are established for code sets, identifiers, transactions, security and confidentiality. OIS is co-leading, with our Office of Quality Management, the DMH initiative to gain compliance as required by the end of 2002.

Planned Projects

DMH plans to complete the projects identified above. Bringing SAM II HR up successfully is the highest priority. After that, CIMOR implementation will dominate all

our activities. Continued expansion of the Outcomes Web project will be the second most strategic project. We will also be investing efforts in improving the DMH Data Warehouse, access to data, and information delivery. Completing the conversion to Windows 2000 network will be the dominant technical challenge.

Department of Natural Resources

Overview

The Department of Natural Resources' (DNR) mission is "to improve the quality of life and economic well being of all Missourians by fostering the prudent use and protection of our air, land, water, cultural, and energy resources." Core business functions that enable mission accomplishment include resource regulation and enforcement, service delivery, resource planning, management and support services.

The department's information technology environment exists to support the core business functions and consists of mainframe and mini computers, wide area networks and a variety of personal computers (PCs). The State Data Center maintains the mainframe computer primarily utilized by the department. The SDC managed mainframe hosts several significant software applications. Examples include a Public Drinking Water System used to support environmental policies and regulations, an Energy Loan System used to manage loans made available to schools for energy efficiency initiatives, and the Integrated Accounting System used to track personnel time and associated project and grant funding. Remote connections to other mainframe computers such as the United States Environmental Protection Agency's National Computer Center are also used to process large data sets.

Mini computers and PCs are used to support department Geographic Information System (GIS) activities, and laboratory analysis of water and air samples. The wide area networks service approximately 2,058 department employees by providing the data sharing links for the department's program, regional and district offices. The PCs are an integral part of the network environment and are used for a wide variety of automation activities such as word processing, data analysis, graphics tasks, and to access network and mainframe applications.

The Department of Natural Resources is committed to enhancing service levels by improving access to department staff and information. To help meet this commitment, the department completed an Information Strategic Plan (ISP) in 1995. The department's ISP identified customers, the services they require, and the information needed to provide those services. Implementation of the plan is proceeding and will promote enforcement activities, responsiveness to public inquiries and coordination of departmental

information systems. ISP projects will facilitate making information readily available to department employees, other state and federal agencies, and the Missouri public.

The automation environment implemented and maintained by the DNR facilitates the department's ability to promote an understanding of natural resource issues, advocate public debate and encourage environmental stewardship. It also promotes responsible economic development by providing access to information regarding environmentally safe practices.

Accomplishments

Current initiatives and accomplishments have occurred in three major areas: infrastructure, Internet and software systems. Also, all initiatives and accomplishments are interdependent. The DNR could not implement software systems and Internet capabilities without an appropriate infrastructure, and many software systems must be "Web-enabled."

Infrastructure

Commencing with fiscal year 1996, the Missouri legislature approved several DNR appropriation requests that support ISP-identified projects. Of these, a FY98 request focuses on the department's automation infrastructure and addresses two primary goals. First, the department's automation environment must be implemented and maintained in such a manner that it is ready to support emerging business needs. Second, the department must manage and control the cost of implementing and maintaining our data processing environment. In addition, the DNR continues to collaborate with the United States Environmental Protection Agency (USEPA) to address electronic reporting of environmental data. These on-going initiatives will facilitate the consolidation of reporting requirements, increase Internet access to data, reduce the reporting cost for industry and improve the integration of environmental data.

Third year automation infrastructure initiatives (FY00) include cabling infrastructure items, network management tools, file servers, desktop hardware and software, and end-user and support staff training. Major accomplishments in the cabling infrastructure category include the design and installation of networks and communications circuits for new Jefferson City and St. Louis office locations, upgrades to the Jefferson Building, and the beginning of a four-year project to update the department's local area network environments to 100mbps Ethernet technology. These tasks have increased data transfer capacity between department entities, enabled the implementation of robust department-wide Internet connectivity, and "set the stage" for implementation of department-wide software systems. The greatly improved system responsiveness will facilitate enhanced departmental service.

As the department's communications infrastructure continues to evolve, utilization must be known to plan for growth and systems must be reliable. Therefore, during FY2000 the

department continued to enhance network management capabilities. The department is now able to monitor communications equipment and perform capacity monitoring and trend analysis of statewide data circuits. In addition, FY00 efforts included the implementation of relational database (DB2) and Notes performance management tools. These new capabilities compliment FY99 efforts that enabled remote software installation, configuration and auditing capabilities. All network management capabilities support quick problem diagnosis, enables software license metering, extends fault-tolerant capabilities, and improves system reliability. Implementation of appropriate tools will continue to enhance the department's network management capabilities during the coming years.

Much has also been accomplished in the server consolidation category. The department's Lotus Notes e-mail and scheduling servers were upgraded, all six Division of Environmental Quality regional offices received upgraded file servers, a new firewall environment was implemented and the capacity of the department's automated disaster recovery system was increased. In addition to improving efficiency and availability, these enhancements enable the implementation of new department-wide software applications --- including departmental e-government initiatives.

To maximize staff productivity and lower costs, the department continues to implement a standard desktop environment. To facilitate this initiative, 100 PCs were purchased during FY00 and distributed across the department. Additionally, a help desk application was purchased. Greatly improved technical support and training efficiencies have been realized and the resultant standard desktop environment will facilitate cost-effective and timely implementation of department-wide software applications. These efforts will continue during the coming years.

With the growth of PCs, networks and communications requirements throughout DNR, the department needed to attain the expertise required to integrate and maintain the resultant infrastructure. Training was also required for specific products such as the network management software, the firewall and the e-mail system. Therefore, during FY00, 28 departmental automation support personnel received formal technical training.

In addition to the training our technical support staff receives, it is also important that we train our employees to use the automation tools provided to them. Therefore, employees and supervisors have been working together to determine which courses are appropriate. During FY00 over 1497 department employees attended training for topics such as SAM II, Microsoft Word, Excel, Access and PowerPoint; and the FOCUS query tool. New vendor training contracts and an "infrastructure" subsidy make it possible for employees to attend this training for 24 percent of what it had previously cost them. Most training accomplished during FY00 was held at the department's computer training facilities, and training in all areas will continue to be a priority during the coming years.

Internet

The department's dynamic Web environment implemented to support public access needs continued to rapidly grow during FY00. This environment has grown from approximately 50 Web pages of information in early 1996 to currently over 4300 pages. The public now accesses over 300,000 department Web pages per month --- an increase from the less than 100,000 pages per month accessed during FY99. Currently the department furnishes databases, technical bulletins and fact sheets to the public via the Internet and we continue to receive requests from the public to provide additional Internet accessible publications and news releases. As examples: statewide Air Quality Monitoring data is collected electronically on a daily basis. This data is then manipulated into approximately 30 Web pages with over 70 graphics and published every Monday on the Internet. The DNR also now provides an online form that the public can use to report illegal dumping, and order forms for land records and Missouri Resources magazine subscriptions.

Ultimately, the department's Web environment will become an environmental information system that will support compliance assistance by facilitating the development of industry sector profiles that would highlight the industries and the types of facilities in particular that are subject to various cross-media requirements. Goals include providing Internet access to cross-linked environmental data, consolidating the reporting requirements of regulated facilities and supporting a facility-wide approach to permitting, enforcement, and inspections. The cross-linked information will strengthen decisions made within the department and impact the decisions of others. It will facilitate an improved understanding of resource issues and informed decision making. Instead of going to numerous programs and agencies for information concerning one company, the public and staff will be able to access our Internet site and link multiple air, soil and water issues to that particular company.

The Web provides a forum for exchange --- an opportunity to collaborate and communicate with the many stakeholders involved in natural, energy and cultural resource use, protection and preservation. Access to environmental data will act as a catalyst for citizens, facilities, and organizations to encourage them to consider the environmental impact of their decisions and actions. Citizens will have access to the data they need to help them evaluate their position on environmental issues. This will facilitate public debate on natural resource issues and encourage improvements in the data collected.

Software Systems

The DNR is facilitating the efficient and accurate collection of air pollution emission inventory data and fees by phasing in a system that will eventually take full advantage of Internet technology. This new system, the Missouri Emissions Inventory System (MOEIS), will provide the regulated community the ability to electronically submit Emissions Inventory Questionnaires (EIQs) through a Web portal. The e-government and government-to-business transactions will make the emissions inventory process more efficient and will reduce the reporting burden of the regulated community. This can

mean significant savings for large companies. Electronic submittal also reduces entry errors and improves data integrity.

The DNR successfully implemented phase I of the new Statewide Advantage for Missouri (SAM II) system. Phase I (i.e., the financial component) was implemented by installing appropriate software on July 1, 1999. However, prior to July 1st over 300 department employees attended a series of eight SAM II related courses, computer hardware for many SAM II users was upgraded, new software distribution methodologies were developed and many users adjusted to a new way of doing business.

Planned Projects

SAM II - HR

All of the above listed infrastructure, Internet and software initiatives must, and will, continue to evolve. Specifically, the DNR will implement the Human Resource component of SAM II on April 1, 2001 and e-government (i.e., Web) projects will ultimately simplify citizen, business and government interaction. The department's efforts will focus on reducing our customer's cost to file "hardcopy" returns and forms to meet regulatory requirements. The department will also realize improved processing time and cost savings through reduced labor previously required to enter data and process paper. Hence, overall benefits will include more efficient department operations and improved customer satisfaction.

Safe Drinking Water Information System

After working with the US EPA for over two years, during FY01 the DNR will implement the EPA provided Safe Drinking Water Information System (SDWIS). The SDWIS will be used to manage drinking water information and to facilitate more complete data reporting to the EPA. Also, SDWIS has the ability to electronically capture sample results directly from labs; thus reducing the number of staff dedicated to data entry and the time used to correct data errors. SDWIS will serve as the long-term primary data system for DNR's drinking water data management needs.

Communications

From a statewide perspective communications needs resulting from data center consolidation efforts, the rapid growth of client-server applications and the deployment of multimedia services mandate the need for a communications-computer environment designed to integrate robust corporate data bases with an evolving, powerful PC-based multitasking environment. To address this need and to facilitate cost-effective and efficient operations, the DNR will continue to aggressively pursue partnerships with other state and federal agencies.

Software Projects

Many of the ISP identified projects are interdependent, and all current and future initiatives originate from them. All ISP software projects will adhere to the emerging

statewide strategy of utilizing IEF software development methodologies. Additionally, an integral part of the target communications-computer environment is a standard hardware and software environment. All emerging department standardization strategies will adhere to evolving statewide standards. The ISP projects personify the statewide strategy of focusing on access, optimization and innovation when providing services and making information readily available and easily accessible to the Missouri public. Resources are being shared and used to their maximum potential and solutions are being implemented in a manner that provides the greatest overall benefit.

Accumulated Demand

Maturation and enhancement of current system capabilities are important as the department focuses on quality and delivery of excellent, reliable service. Public access needs must be supported and department employees must have reliable communications-computer systems to facilitate quick decisions and actions as they strive to fulfill the DNR mission.

Missouri Public Defenders Office

Overview

The Mission Of the Missouri State Public Defender System is to provide high quality, zealous advocacy for the people who are accused of crime in the State of Missouri. All Information Technology Projects are initiated in support of this mission and strive for enhanced quality and savings in all business processes.

Accomplishments

Automate Case Preparation

This project included the training and implementation of multi-media systems. Digital cameras, scanners, color printers, and CD burners are utilized. Digital cameras save on film development costs and waste. Only pictures needed for trial are printed. The digital pictures are burned to a CD for storing with the physical case file. Scanners reduce the need for costly photocopies of pictures and documents from law enforcement officials, prosecutors, social services, and the courts. All of these newly created electronic images and documents can be stored in the electronic case file. Each office attended customized training so staff could fully apply this new technology in their case preparation.

SAM II Human Resources Electronic Timesheet Rollout

As part of the statewide SAM II Human Resources/Payroll implementation, the PD system created a mechanism to interface time and leave used by our employees directly into the SAM II desktop. The change to a twice-a-month payroll schedule means that the amount of data to be submitted has doubled, yet the deadlines for time and leave submission are shorter than ever. The automated interface process dramatically reduces data entry and allows Human Resources personnel to use their time more efficiently. Additionally, the PD System has shared this Lotus Notes application with the Department of Natural Resources and the Office of State Courts Administrators, both of which will begin using the application in 2001.

Increase Attorney Access to Information

Purchasing legal research tools and information can be very costly. The PD system has promoted the use of free legal, medical, and investigative research sites accessible on the Web by supplying a specialized link page for all employees. The use of these sites and CD based legal research tools has eliminated the costly purchase and dissemination of hardbound books.

Automated Trial Presentations

Making the trial process and information presented during a trial easier to understand is a difficult endeavor. The use of computer generated graphics, bulleted lists, and displaying three-dimensional items using a digital overhead projector assist the attorneys with effectively presenting the client's case in a format more familiar and easily understood by jurors.

New Employee Orientation (NEO)

In order to ensure that staff time and computer resources are used effectively, a two-day training course has been developed. The orientation program, which includes information from HR, Accounting and Administration offices, supplies new employee with hands on computer training and inexpensive customized manuals used to perform their job efficiently. Advanced training is also available on the Electronic Case Management systems and all of the multi-media software and hardware available.

Security

Most information within the PD system is covered by client-attorney privilege, so security of these electronic records is a high priority. All PD documents, files and access to information must be secured even between our own offices. An internal security system has been implemented to assure that inappropriate case information access has not been granted between offices in cases of conflicts. Additional measures have also been implemented to ensure that any non-authorized external access is rejected.

Planned Projects

Integrated Criminal Justice System Plan

This e-government initiative will begin the process to increase electronic interaction with other agencies within the criminal justice system in order to expedite cases, assure fair access of information to all parties, reduce the paper burden and associated costs, and more effectively represent our clients. Additional security measures will be addressed as a part of this project to allow appropriate information sharing between agencies and protect against unauthorized information access.

Case Management Systems

Enhancements and improvements of the electronic Case Management Systems continue to increase efficiency of attorneys and staff, while better serving our clients. The PD Electronic Case Management has already saved time and reduced duplication of effort.

Migration of PD database access to a web-friendly format enables traveling and at-home staff to work efficiently without purchasing or supporting specialized software. This migration will also reduce our reliance on one particular piece of software to access information and applications.

We will continue to increase in-house legal research and knowledge warehouses through new databases. Implementation of Policies and Procedures and FAQ databases in administrative areas will reduce the load on Human Resources, Accounting, and other administration functions. This also allows local offices more time on cases and mentoring of newer employees.

Remote Access

Access to information independent of location is vital. Many of the rural area offices support multiple counties and travel extensively. The ability to offer rural area offices the same access to software, hardware, applications and information is significant for recruitment, retention, and quality of PD staff. Remote access using either direct dial into the PD network or Internet Virtual Private Network (VPN) technology is required for traveling employees and those needing to work extra hours from home.

Virtual Employees and Offices

The idea of any employee being able to work out of any office and supporting any function is necessary with our geographically dispersed offices. The infrastructure will need to be expanded to accommodate this initiative and the remote access plan as well.

Accumulated Demand

Training, support, web page design, numerous new application and enhancement requests, and the implementation of new and existing hardware and software are areas of continued concern. There is a continuous backlog of new application and enhancements requests as well as connectivity and statewide access expectations with 24x7 availability. Information technology staff retention is the key to reducing the accumulated demand and moving forward at a pace required by our client needs and the expectations of Missouri citizens.

Department of Revenue

Accomplishments

Overview

The Department of Revenue's single word vision is to SIMPLIFY. The outcomes that support that vision are to: 1) increase customer satisfaction, 2) decrease the cost of compliance, 3) increase voluntary compliance and, 4) win the Missouri Quality Award. While there is still room for progress, results show lines are shorter, refunds are faster and the department did win the Missouri Quality Award. Information Technology was a key contributor in the relentless pursuit of these outcomes.

The Department of Revenue accounts for over $10 billion in revenue for the state each year. The department processes 2.5 million personal income tax filings annually. Over 130,000 businesses file monthly, quarterly, or annual sales tax returns. Over 1.9 million driver licenses are renewed each year and also processes over 4.6 million vehicle registrations. Over 2.5 million vehicle titles are processed. Information Technology systems played a vital role in supporting internal and external customers during all these transactions (and many other operations not mentioned) whether they use over-the-counter, paper, phone, fax or internet as the media in support of their transaction.

Project Management

Project management played an increasing role in accomplishing departmental projects this year. An additional 15 Revenue project managers completed the Boston University course sponsored by the state. Project managers from the business process and information technology areas successfully joined together to improve departmental projects.

Security

The security committee took the security evaluation report presented to the department during 2000 and turned the report into policies and procedures that will be implemented early in 2001.

Network

An IBM team working with the department network team completed a thorough evaluation of the department's networks. Significant portions of the department's mission critical information now transits the networks. This evaluation was the foundation for a four-year network improvement plan. A budget item for $1.2 million was request to begin the improvement plan in FY02.

Division of Motor Vehicle/Driver Licensing

On July 1, 2000, the Division implemented biennial motor vehicle registrations and a 6-year drivers license. While on the surface these two projects appear small, the value to both the Department of Revenue and the citizens of the state will be immense. Biennial registrations and 6-year drivers license have the effect of reducing by 50 percent the volume of traffic in our field offices. Less traffic means better customer service and less time spend in the offices by our customers. An additional benefit for our customers is that they will need to make fewer trips to our offices.

In addition, the Division of Motor Vehicle and Drivers Licensing completed a number of smaller projects directed at implementing legislation. The goal of these technology projects was to reduce the administrative burden on the operating bureaus and better track possible violators of the law. The projects included the following: a revise process for motor vehicle lien perfection; a new reinstatement fee system; and, an implementation of mandatory insurance laws changes which included court ordered suspensions, court ordered supervision, sampling suspensions and insurance fraud suspensions.

Division of Taxation

- The new Missouri Individual Income Tax System (MINITS) data entry module (Speedup) was enhanced to include support for the MO-1040P, MO-PTC and the revised MO-1040. This allows us to completely replace the terminal-based data entry system with a graphical user interface that substantially improves the efficiency of the data entry operators. These improvements, combined with increased vender support for 2D bar coding, make the Speedup module instrumental to providing faster turn-around on citizen's tax refunds.
- A pilot project was conducted to allow Internet filing of individual income tax returns. "Webfile 2000" allowed a small number of qualified citizens to file their 1999 returns over the web. The project was a success, with 261 returns received with 7% lower error rate than traditional paper returns. Internet filing is easy to use, reduces errors, reduces processing workload and speeds up the refund process.
- Support was built into the tax systems to accept credit cards for most payments, providing another payment option to citizens. This initiative also reduces the manual processing associated with other forms of payment. Taxation received over $1 million in credit card transactions in 2000.
- MINITS was modified to support two new tax returns. The MO-1040C is a short form for part-year and non-residents. The MO-1040P is a short form for pensions, pharmaceutical credits and property tax credits.

- The MINITS and Corporate Income Tax Systems (COINS) successfully completed the 2000 Article X Distribution.
- MINITS was modified to support the Treasury Offset Program (TOP). TOP is a mutual debt offset agreement between the Internal Revenue Service (IRS) and other state agencies. This greatly improves our ability to collect on debts owed to the state and resulted in an additional $7 million revenue for 2000. Debt offset was also improved between our Withholding and Individual Tax Systems.
- Modified County Aid Road Trust Fund (CART) System to communicate with SAM II.
- Y2K wrap-up work and validation.
- The MO Sales Tax System (MOST) staff participated in disaster recovery testing with the State Data Center to validate our backup and recovery procedures.

Division of Administration

- Implemented 6-Year Driver License changes in the Missouri AAMVANet Interface (MAI) systems. These changes were a portion of the work involved in reducing the frequency that MO citizens need to visit a DOR office to renew their driver licenses.
- Upgraded Wide Area Network backbone. This will provide improved response times for the automated systems in DOR offices.
- Implemented revised Driver Privacy Protection Act provisions. This increased the privacy of citizen personal information by closing all records. Access is only allowed for authorized parties.
- Participated in producing another Article X distribution. Our participation is in scheduling computer jobs, verifying and delivering output. Article X refund checks are sent to all income tax payers for the specified year.
- Implemented a Support Center in the Technical Support Section. This improved productivity within our Technical Support Section and provides improved responses to the Division and Department computer users.
- Converted expendable supplies and Personnel/Payroll systems to SAM II. Converting existing automated systems assisted in starting the SAM II systems with accurate data. We hope it reduced manual effort in start up of the new systems.
- Completed development of a new Case Management System for DOR General Counsel Office. Staff customized an acquired system to meet the needs of the DOR General Counsel Office. It provides a process flow and central repository of case information.
- Converted to Ethernet network within the Division of Administration. This increases computer response time within the division.

Planned Projects

Division of Motor Vehicle and Driver Licensing

- Implement Field Automation of Title and Registrations (FASTR) in the new calendar year. FASTR is the Division's program of complete reengineering of

our title and registration process. The program modernizes our existing antiquated title and registration system and provides for real time updates.

- Implement the graduated drivers license law on January 1, 2001. The graduated drivers license law requires first time drivers between the age of 15 and 18 years old complete a period of driving with a licensed driver and restricted driving before getting a full driver license. Currently, 19 percent of drivers between the ages of 16 and 20 years old are involved in at least one motor vehicle accident. This is a higher rate of accidents per driver then for any other age group.
- Implement an enhanced sampling program by July 2001. The enhanced sampling program creates a database where insurance companies will report their book of business to the Department of Revenue. The goal of the program is to reduce the number of uninsured drivers and thereby enhance safety on our roads.
- Implement Internet motor vehicle registration renewals this next calendar year. Internet renewals will allow citizens to renew vehicle registrations without coming into our offices.
- Implement a pilot project to allow financial institutions to electronic process liens with the Department. This project has the potential of dramatically reducing paperwork for both the Department and for financial institutions.

Division of Taxation

- Consolidated Registration (CoReg) is a joint initiative between the MO Department of Revenue, MO Department of Labor and Industrial Relations and the Internal Revenue Service to provide one-stop business registration for new business in the State of Missouri. It will consist of a consolidated, Intranet-based system that will be utilized by both state agencies.
- The Sales Tax Geographical Information System (STRGIS) will be an Internet-based application that will return the sales tax rate for any given Missouri address.
- If funded, we will contract a study to explore the possibility of creating an Integrated Tax System for the Department.
- The Individual Income Tax Webfile program will be expanded and be made available to a larger number of citizens.
- Sales Tax filing via the Internet will be made available through Nation Tax.

Division of Administration

- Develop a new Motor Fuel/Special Fuel Tax System. This development project was funded through an appropriation. During 2000, design, programming and testing of the system continued. When completed, it will automate a manual system and provide methods for Fuel Taxpayers to file their reports electronically over the Internet. It is scheduled for implementation January 2002.
- Develop a new Case Management System for the Criminal Investigation Bureau. Staff members are completing the system design as of the end of the year and will customize an acquired system to meet the needs of the DOR Criminal Investigation Bureau.

- Implement Graduated Driver License changes in the Missouri AAMVANet Interface (MAI) systems. These changes are a portion of the work involved in providing a revised progression of types of licenses specifically for young drivers.
- Develop a Geographical Information System (GIS) to provide Sales Tax rates by specific location via the Internet. By using GIS, out of state sellers can accurately determine the sales tax rate to charge consumers. DOR may also use the features provided to verify tax rates when titling vehicles.
- Provide data base and technical support for departmental Internet applications and other projects. The DOR is developing several Internet applications using technology that is new to the department. Staff members are expanding their skills to support this environment.
- Upgrade tail circuits in remote offices for increased computer response time. Since the WAN backbone has been upgraded, the tail circuit upgrades will be effective for increasing communications capacity and response time.

Accumulated Demand

- Implemented standard security policy and procedures.
- Planning and implementing network improvements based on IBM network study.
- Plan and implement network upgrade to Windows 2000.
- Implement automatic fail over features for RS 6000.
- Expand use of Geographic Information System for departmental data analysis.
- Develop additional Internet/Intranet applications.
- Complete projects that are in progress.
- MITS has 130 requests totaling 20,000 hours.
- MINITS has 91 requests totaling 17,000 hours.
- COINS has 46 requests totaling 6,900 hours.
- TIFS has 14 requests totaling 1,120 hours.
- Withholding has 17 requests totaling 4,080 hours.
- We also have 41 outstanding requests for miscellaneous PC Systems totaling 16,600 hours.
- In addition, approximately 40-50 smaller projects aimed at enhancing the existing systems are ongoing and are in various stages of development.

Office of the Secretary of State

Accomplishments

Infrastructure

This project includes communications and server upgrades. The wiring upgrade within the office has been started. Fiber has been installed connecting all the floors from the point of entry in the building to the server room. The plan is to continue to remove the CAT 3 wiring and move to CAT 5 and beyond. Switches have been upgraded on all floors to handle the growth in traffic and the number of connections to our internal network. Server upgrades have been focused in several areas: web presence, database, file and our mail servers. A firewall has been installed within the Secretary of State's Office. Separate physical environments have been created to allow for separation of development, quality assurance and production. All of these efforts move us to preparing a quality solution with minimal impact to the ongoing production work at the Secretary of State.

Elections

A new application was delivered for the November General Election. This provided the Election Division with an integrated solution for Election Night Reporting. The application enables the customer to create an election based upon results from the primary election and provides pre and post election reporting capabilities. It also provides election authorities with the capability to enter the results via the web.

Organizational

Information technology staff have been reorganized around business needs and, where possible, around areas of interest for the staff members. The two areas that have evolved are application services and network services. As we move forward with specialization in these areas we will be able to provide better technology solutions.

Planned Projects

Infrastructure

Continue to upgrade the communication and server components. Plan and prepare for the implementation of the 2000 product line from Microsoft. This will require additional upgrades at the workstation level depending on the customer's business needs. Continuing with this project ensures that a stable and supported production environment is available to the customers of the Secretary of State.

Organizational

Policies, procedures and standards are being developed to ensure a consistent framework within the Information Technology Division. This will allow for cross training of staff and assist in problem resolution as well as contribute to better customer service.

Statewide

Participate in statewide initiatives that allow the agencies of Missouri to provide better services to the citizens through the use of technology. This would include the E-Government and the Architectural Standard initiatives.

Secretary of State

Continue to utilize the Internet to provide technology solutions to the business areas of the Secretary of State's Office. This will allow more information to be available to the citizens.

Accumulated Demand

The backlog exists in both the Application Services and Network Services areas of the Information Technology Division. There are currently 15-20 projects identified at this time that will need information technology resources to assist in the solution.

Department of Social Services

Accomplishments

Electronic Benefits Transfer/Direct Deposit

Missourians who qualify to receive Food Stamps, Temporary Aid to Needy Families (TANF), and/or a variety of federal benefits currently access their benefits via Electronic Benefits Transfer (EBT), a Personal Identification Number (PIN) protected plastic magnetic stripe card. The EBT card can be used at most of Missouri's ATMs to withdraw cash benefits. It is accepted by grocers who participate in the federal Food Stamp program for debit purchases of approved food products.

Despite the implementation of EBT, direct deposit is the Department of Social Services' (DSS) preferred method of electronic payment for cash benefits. Direct Deposit is cost effective for the state when compared to EBT or paper checks. Direct deposit uses the payees' personal bank accounts, thus avoiding the need for the state to establish and maintain an EBT account.

Missouri's EBT system was developed and procured jointly with seven other states, a consortium collectively referred to as the Southern Alliance of States (SAS). Missouri's EBT system is among the first in the nation that allows citizens who receive both state and federal benefits to receive them on a single card and to use the QUEST operating rules. There are 29 states currently operating under the QUEST rules. Implemented statewide in May 1998, Missouri's current EBT system saves taxpayers approximately $1 million per year. Enhancements to the EBT system that have been implemented are:

- Missouri has established an 800# for financial institutions to access an automated voice response unit for enrolling DSS TANF recipients in direct deposit accounts.
- Missouri's TANF recipients can now use the Missouri Financial Institution Product Summary to select a no-cost or low-cost account that meets their needs. The Summary, compiled in conjunction with the State Treasurer's Office, lists banks, credit unions and savings and loans that offer no-cost or low-cost accounts.

Account information will soon be available on line at the State Treasurer's web site.

Missouri Automated Child Support System

The Missouri Automated Child Support System (MACSS) was developed in compliance with the 1988 Family Support Act that mandated each state child support agency install a statewide, comprehensive management and information computer system. Representatives from the Department of Social Services, Office of State Courts Administrator, county circuit clerks and prosecuting attorneys worked together to design and develop MACSS to meet their requirements and the mandates of the federal legislation.

Implemented in September 1998, MACSS is a single statewide system that maintains one record of case data that is shared by all involved in the child support community and provides the following:

- On-line processing for the most up-to-date information,
- On-line financial processes including bank reconciliation, daily processing of receipts, distributions and disbursements,
- Automated support calculations, automated non-custodial parent location and automated enforcement.

Federal mandates implemented or currently being developed for the MACSS system include:

- Centralized collection distribution of child support collections was implemented in December 1999.
- The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 required states to implement major changes to retain federal certification. Changes to distribution accounting, federal case registry and federal data match were implemented December 28, 2000 to comply with PRWORA requirements.

Family Assistance Management Information System

The Family Assistance Management Information System (FAMIS) is a statewide, automated, integrated eligibility system for DSS programs including Temporary Assistance, Food Stamps, Medicaid, Child Care and FUTURES. FAMIS will calculate benefits, produce notices to clients automatically and provide reports for case management and supervisory management for all levels of program administration. Roles and responsibilities of the Income Maintenance caseworker continue to change dramatically, particularly with the passage of the Welfare Reform law. FAMIS will be an essential element for maintaining service delivery levels as eligibility determination continues to become more complex.

- FAMIS will automate labor-intensive processes, thereby speeding delivery of services to clients.

- FAMIS will standardize benefit eligibility determination, thereby reducing error rates.
- FAMIS will free up staff time that will be redirected toward the new welfare reform goal of helping clients become self-sufficient.

Resource Directory, Provider Registration and Child Care components are operational in the FAMIS system. Implementation of Child Care, which began in 1999, was completed statewide in April 2000.

Prince Hall Family Support Center

The Prince Hall Family Support Center (PHFSC) was established and operates under the authority of the Missouri Department of Social Services. The facility was established to serve as a family resource center following the family support programs concept. Thus, the center seeks to develop a model, incorporating five basic family support practices: community-based programs and services, family focused programs, family empowering programs, family skill building, and culturally responsive programs and services.

The facility consists of twenty Missouri State and private not-for-profit agencies joining in the effort to provide services in a comprehensive, integrated and holistic manner.

- A client information tracking and referral system was developed and is available for referrals and scheduling of appointments with various on-site agencies. Three Department of Social Services agencies (General Services, Family Services-Children's Services, and Family Services-Income Maintenance) have been one utilizing the client information tracking system.
- Missouri Works, installed for PHFSC clients, provides on-site Internet for clients to access available employment information.
- A touch-screen information kiosk, supported within PHFSC, provides clients information about services available by agencies in the facility, the Governor's Silver Club and local employment opportunities.
- A direct telephone line is available to clients that provide immediate access to the Child Support payment information.

Legacy Systems Enhancements

Fifty-four (54) production systems with over 6,300 application programs are maintained by Division of Data Processing staff to support various programs administered by the Department of Social Services. Major projects successfully completed during 2000 were:

- Completion of Y2K conversion in 2000 without downtime,
- Implemented federally mandated Common Area – Department Client Number race code conversion,
- Implemented federally mandated Medicaid reinstatements for TANF clients,
- Implemented direct deposit for Energy Assistance payments to utility companies,
- Implemented federally required Child Abuse and Neglect reporting enhancements,
- Developed SAM-II financial payment interfaces and recoupment process,

- Developed SAM-II financial vendor payment interface and SAM-II HR conversions,
- Implemented Claims and Restitution federal reporting and tax offset enhancements,
- Implemented federal Medicaid eligibility for 60-month tracking,
- Implemented Grandparents as Foster Parents program enhancements,
- Implemented PACE (elderly care) and delivered meals enhancements,
- Implemented Family Care Safety Registry interface to Department of Health,
- Implemented Foster Care enhancements adding one additional payroll, Firstar Bank interface, GTE interface for recouping rehabilitation service funding, history tracking and SSI application and approval tracking system,
- Implemented Internet and automated voice response systems access to Division of Aging nursing home employee disqualification list,
- Converted to new state banking (Firstar Bank) interface for assistance checks,
- Implemented systems enhancements to enable Managed Care Eastern Re-enrollment.

Planned Projects

Electronic Benefits Transfer/Direct Deposit

Pending approval of a FY02 funding request, approximately 140 EBT camera systems currently installed in county offices throughout the state will be replaced. Camera replacements will require that the attached PC workstation must also be upgraded. EBT camera systems are used to transmit digital photos of clients through the DSS telecommunications network that are matched to mainframe case data and electronically transmitted daily to a vendor to issue EBT cards to clients. Photos of clients on EBT cards are required under Missouri statute.

Missouri Automated Child Support System

In calendar year 2001, PRWORA non-certification enhancements will be implemented. In addition, user identified change requests, approved by a Change Control Board, will be incorporated into MACSS as funding permits.

Family Assistance Management Information System (FAMIS)

Analysis for the Food Stamp phase was completed in 2000, specifications were written, and development is in progress. Pilot of the Food Stamp phase is scheduled for late spring 2001 with statewide rollout to be completed from July through December 2001.

Prince Hall Family Support Center

In 2001 the client tracking/referral system will be offered and implemented for other state agencies and not-for-profit service providers that offer services at PHFSC.

Legacy Systems Enhancements

- Enhance the current Claims and Restitution System to provide for additional federal and program specific reports.

- Reduce outstanding service requests (currently over 500) that have been submitted by program divisions.
- Develop secure Internet web applications that interface with existing systems to provide timely data to clients, providers and staff.
- Provide ongoing systems maintenance and schedule benefit adjustments.

Accumulated Demand

Electronic Benefits Transfer/Direct Deposit

Replacement of camera systems is necessary because maintenance and repair parts will not be available after July 1, 2001. Fiscal Year 2002 funding, included in the DSS network upgrade request, must be approved to enable camera replacements.

Missouri Automated Child Support System

Since the initial implementation of the MACSS system in September 1998, a total of 546 change requests have been documented and submitted by the program agency. New federal regulations proposed, if adopted, will further change child support payment distributions and systems accounting structure.

Family Assistance Management Information System (FAMIS)

The next phase of FAMIS will be Temporary Assistance to Needy Families/Medicaid programs. Work on this phase is scheduled to begin in July 2001. A pilot is currently scheduled for the fall of 2002 with statewide implementation in 2003.

Prince Hall Family Support Center

Maintaining the client tracking/referral system and the kiosk system and implementing an equipment replacement program are essential to PHFSC service concept. Provider agencies at PHFSC will require system enhancements as program services offered are updated or changed.

Legacy Systems Enhancements

Information Services staff support 54 production systems. There are over 500 outstanding service requests that have been submitted by program customers. Critical to maintaining production systems and reducing the backlog of service requests is retaining staff. Resources that were required to successfully address Y2K and staff turnover has contributed to an increase in outstanding service requests. With current staffing levels and assuming no additional federal mandates, the backlog of service requests will require at least two years to complete.

Office of Information Technology
2000 State of the State IT Report

Office of the State Courts Administrator

Accomplishments

The Statewide Judicial Information Network

One of the continuing successes for the Judiciary was the continued building of a frame relay to allow statewide communication. Over the past two years, the Office of the State Courts Administrator (OSCA) has been working with the Missouri State Highway Patrol and the Department of Social Services to share costs and reduce disruptions to courts by building a joint wide area network that all three agencies can share. This partnership continued to save taxpayers money and allow state staff time to continue with their regular business.

Infrastructure

Each year brings an analysis of the statewide standards OSCA-IT has set for computers, cabling, networks, hardware and software necessary to support the Missouri Court Automation Project. As of this fiscal year, 96 courts have completed infrastructure alignment in preparation for receipt of the case management system. By the end of FY01, all Missouri courts will have a standard infrastructure.

Lotus Notes Project

One of the largest benefits for courts with standard infrastructure is the ability to use the Lotus Notes e-mail and database software, chosen for implementation across the Judiciary. This system allows for judges and clerks to participate in discussion groups and share resources, and allows the public and other agencies to interact with court staff via e-mail. During this current fiscal year 1,082 Lotus Notes users were added, bringing the total number of users to 4,064. These numbers show that 100% of Supreme Court and Appellate Judges, Juvenile Officers, Court Administrators, Associate Judges and Appellate Clerks have access to Lotus Notes and 92% of Circuit Judges have access to Lotus Notes. We expect to have all Circuit Judges at 100% during the next fiscal year.

Case Management System

With most of the Judiciary now able to utilize the IT foundations of a wide area network, standard infrastructure and a routine communication tool, OSCA-IT and project staff

attained an aggressive rollout schedule of the statewide case management software, Banner Courts 3.0. There are currently 32 county courts using the Banner software in addition to all 3 appellate courts, the Supreme Court and the Statewide Fine Collection Center. By the end of this fiscal year, we will have completed an additional 16 county courts. Twenty-seven counties have already requested implementation of Banner during FY02.

Case.Net

The most tangible benefit to lawyers, litigants and Missouri citizens has been the OSCA developed software, Case.Net. Case.Net allows courts that have begun using the statewide case management system to display their public case information through the Judiciary homepage. The general public can search for public case information using name, case number or filing date without making a trip to the courthouse or having to wait on hold for a clerk to be able to assist them by manually looking up a file. The response to this service has been phenomenal and as of the end of December 2000, 27 courts and the Statewide Fine Collection Center are providing service through the system.

Planned Projects

OSCA-IT has several projects that have been initiated in support of the increasing demand for more information technology products as courts begin to see the benefits of technology and respond to the requests of their constituents.

- **Electronic Filing** of cases is still a top business need for both courts and lawyers. We have been participating in international discussions regarding the use of XML standards to transfer information and anticipate that business needs will drive useful technology to the forefront. We have also budgeted for a pilot of some the most current software during the next year.
- The **Management of Jury** lists and instructions to potential jurors has been an ongoing judicial business need as well. In order to maintain an effective justice system, we also need to maintain a broad listing of eligible jury pools and provide clear and concise information to potential jurors. This year, the Juror for Windows software developed by OmniTech is being piloted and rolled out to several courts. If funding for rollout continues to be available, we hope to accommodate training and rollout to the over 70 courts requesting this new technology.
- In an effort to address the shortage of training facilities in the state, we are currently working with the Judicial Education Department to develop **Web-enabled Learning**. It is our goal to allow users to train with less statewide travel requirements. There could also be an increased degree of learning since users will be working through lessons one on one with their PC.
- As we continue to work with SCT Corporation on their continued baseline developments of their upcoming Banner Courts release, we are also working with them to finalize a series of **Juvenile Enhancements** to the software. These enhancements would make Banner a complete application solution for Missouri

case management, and we hope to have an initial version of the enhancements in a pilot court this year.

- One of the lessons we have learned from our aggressive rollout of the Banner software this past year has been how truly ineffective and expensive it can be to manage tape backups from across the state. In order to reduce the burden on court staffs, increase the efficiency and reliability of the backup and open our opportunities for statewide search capabilities, OSCA-IT will be implementing a **Storage Area Network** this year.
- As more and more courts begin to share the unique aspects of being on the same system, the realities of the benefits of **Data Transfer** become more apparent. When cases are bound over from one court to another or the Fine Collection Center has to send tickets back to courts for hearings, the benefits of being able to receive that file without any duplicative data entry are very appealing. OSCA-IT staff are currently addressing this issue and have several solutions they will be testing this year in the hopes of finding a permanent data transfer solution for Banner Courts.

Accumulated Demand

The vision of the Missouri Court Automation project is "to build a family of automated systems combining advanced technologies and core court processes to provide improved service, fair and equitable justice and increased public access to the Judiciary." It is the responsibility of OSCA-IT to research and test technologies, and if they meet the long-term business needs of the Judiciary, to implement them as a part of Missouri's "family" of automated systems.

In order to establish the continued business needs of Missouri Courts and receive feedback on current systems in place, project management staff are conducting regional evaluation sessions of the current case management software system and the family of systems working with it. One of the unique challenges that faces OSCA-IT this year is the need to balance available resources with the growing desires of a Judiciary that is becoming more dependent on technology solutions for their business needs.

The specific needs that have been voiced throughout this year and that we expect to receive further feedback on at the evaluation sessions are data transfer, electronic filing, document management, imaging and Data Warehousing. Even though the court staffs are often not able to use these terms to describe what it is they are seeking, their business needs are clear and reflect a growing desire for technology to solve the business problems of increasing case loads and decreasing staff time.

The statewide rollout of Banner is on schedule to be complete by the year 2004 if financial resources remain stable. However, as more of the state begins to recognize the value in this technology and desire the addition of other automated systems such as electronic filing and data transfer, resources will rapidly become an issue for this information technology department.

Department of Transportation

Overview

The Changing Role of IS

Information Systems (IS) business units all over the world have been experiencing many trends which have demonstrated that there is a shift in the way people view the role of IS as a business. Information technology (IT) systems must now add value to department business strategies by providing people with useful information that helps them collaborate with others and present ideas in more convincing ways. In addition to being value-added, IT systems must be flexible and adaptable to easily integrate with a myriad of data types and formats. As the need increases for access to more "valuable" information, so likewise must efficiency and effectiveness increase in the way IS departments deliver services to its customers.

The impact that "valuable" information has upon organizations and their Information Systems teams is far reaching. Not only can the quality of information change the strategic objectives pursued by an organization when making business priority decisions, but it can reset the technical goals which IS departments may have planned to pursue. Because of this ever-increasing need for more" value-added" information and the constant shift in business priorities, IS departments must become more customer-focused and nimble in the manner in which they deliver services to their internal customers. MoDOT has been no different than other IS departments who must face and develop strategies to meet these kinds of challenges.

In order to place a stronger emphasis on customer focus and deploy IT services that could be both flexible and adaptable, MoDOT's IS Director, Lew Davison, accepted the challenged to adopt a new organizational model. This model, called "Structural Cybernetics", positions IS departments to meet the increasing demand from customers to produce more value-added systems, but at the same time, keep up with the latest changing technological environment. It redesigns IS roles into a business-within-a-business model that allows for functional specialization. This is accomplished through line of business (LOB) domain boundaries and product specialty. Each LOB can focus on its unique product line and team with other LOB's to ensure that each aspect of the customers needs are met.

This new structure requires that technology requests be aligned with the overall strategic objectives of the agency and further it can improve the supply chain metrics needed to deliver IT products timely and of value to the customer. In a recent *Harvard Management Update* survey conducted by the Mercer Management consulting firm, senior executives indicated that they believe the *"customer relationship is the single most important source of competitive advantage at the dawn of the new millennium"*. Having the customer as a technology business partner is vital to the survival of information systems departments in the new millennium. But more so, having a structure which provides for the appropriate flexibility and adaptability to the ever-changing business and technology priorities is the remedy IS departments are seeking in the new millennium.

The Y2K challenge centered our attentions on issues surrounding application compatibility, migration and their interoperability. Now that this challenge has been successfully met, we find that we can use this information to develop department application portfolios, system architectures and integrated statewide infrastructures. These tools help support our efforts to develop an information strategy plan that is diversified; yet centralized. Application portfolios tell us how well diverse our systems are or need to be, and provide us with standards that can be used to support our system architectures and statewide infrastructures. In order to effectively manage the people, procedures and commitments represented in such a diverse portfolio, IS must be structured in a manner that promotes customer focus, teamwork and process improvement strategies. The attention given to customer focus has not only worked to improve our customer relationships, but is molding the goals and content of our information strategy plan. These efforts not only save time and money for IS, but increase the value information systems provide as a higher-rated commodity for our customers.

The following accomplishments listed below demonstrate MoDOT's Information Systems response and commitment to fulfill its customer-driven needs. In this list you will find that our applications and systems support the direction to be customer-focused and flexible. We believe the information systems are not only value-added tools that our internal customer benefit from by using them, but the public citizenry can benefit from by the value of information being provided to them.

Accomplishments

Our accomplishments are categorized by the definitions of the Harvard Business School IT Balanced Scorecard model. This model uses four quadrants to relate IT tools to their support of business process improvements, customer relationship management, human capital management and financial system management. By using this methodology we are capable of directly relating the impact of this IT project to the strategic objectives of MoDOT.

Business Process Improvements

These solutions support or measure internal work processes and how well they are being performed and can collaborate efforts with suppliers or other external providers.

Transportation Management Systems (TMS)

Transportation Management Systems is an on-going project that was implemented in March 1999. TMS allows MoDOT to integrate data from multiple sources such as bridge, pavement, safety, traffic monitoring/congestion, outdoor advertising (billboards), junkyards and travelways. TMS allows the user to graphically view and analyze data to make better decisions concerning preservation and construction of MoDOT's transportation systems. TMS is based upon a common location referencing system that utilizes Arc/Info software to link graphical information to tabular information through the use of Oracle relational databases. In the past year the following enhancements have been included in TMS: added the Junkyards system; developed automatic loading of accident and location information into the Safety Management System; created the Safety Needs Assessment Report and the Accident Statistics Manual; created new queries to reflect history for Vehicle Miles Traveled (VMT) and Mileage Summary reports; created canned queries for Outdoor Advertising; created a process to automatically generate correspondence for Outdoor Advertising; began development of the State of the System Detail application; and created the travelway lane maintenance application. We are currently developing a new bridge application to replace MoDOT's legacy mainframe application, and an automated process to view images, such as Accident Reports, from our on-line applications.

Virtis System

Virtis, MoDOT's new bridge load rating system, was implemented in early summer of 2000. Virtis is the American Association of Highway and Transportation Officials' (AASHTO) new product for bridge load rating, featuring state-of-the-art graphical tools to speed preparation of the data and application of the results. Virtis provides an integrated database where bridge rating inputs and outputs can readily be stored and re-used.

Q Series Library

Information Systems is in the process of implementing Q Series, an Information Technology library solution from EOSi (http://www.eosintl.com/htdocs/q.html). Q Series is a sophisticated library information management and access system. This application is designed to provide a single point-of-access to the "world" of information. This "world" can include a library's own collection, a branch library's collection, multimedia files, CD-ROMs, URI (URL/URN) links, and commercially or internally published documents found on the Internet, Intranets and Extranets.

Client Contact Database (CCDB)

Information Systems has developed a new Lotus Notes-based system to track all communications between MoDOT Information Systems personnel and our internal (to MoDOT) clients. The system tracks each contact by status, ensuring that commitments are not lost or forgotten. It also provides a history of our client interactions.

Shared Technology Access Request Tracking System (STARTS)

Implementation of a new Lotus Notes-based network and application access request tracking system to replace our old paper-based system is nearing completion. The new system tracks each request through a series of approvals and implementation phase and then provides a history of all requests (pending, approved, and denied). The system will also show all users with access to any shared resource. The system is flexible, allowing new resources to be easily added.

Fleet Management Improvements

A new application that tracks equipment requests through the approval process is currently in the testing phase. This new system is a Lotus Notes-based application that uses Notrix (http://www.percussion.com/product/notrix.htm), Percussion Software's data integration product, to pull data from our Oracle-based Fleet Management system. The system triggers e-mails to expedite the approval workflow.

Client/Server BAMS/DSS (Bid Analysis Management System/Decision Support System)

A client server version of BAMS/DSS version 5.0c was installed for testing during July 2000. The current support vendor (InfoTech) provided personnel who assisted with data migration from the current MVS production system into the client server version. BAMS/DSS assists MoDOT in performing analysis of bidding and contracting activities. The software helps to ensure MoDOT provides equal opportunities in the bidding and contracting process and helps us to evaluate bidding activities.

Intelligent Transportation System (ITS) Implementation

Information Systems personnel have worked with other MoDOT divisions to design a network, currently under construction, that runs along major Missouri highways. This network will transport video and road sensor information from the highway to traffic management centers in metropolitan areas where an automated analysis of road conditions will permit MoDOT staff to proactively manage emergency situations and dynamically route highway traffic around congested areas.

Backup and Disaster Recovery System

All 11 of our AIX backup & recovery servers have been upgraded to the 3.7 version of Tivoli's Storage Manager software (previously IBM's ADSM). This upgrade included

updating client code on 150 servers at the MoDOT General Headquarters (GHQ) complex. The upgrade of the client code on the remaining districts' NT servers is planned for first quarter 2001. Additionally, the automated tape library at GHQ will be upgraded to double the capacity of the existing tapes while using the same physical footprint. With the upgrade in our WAN to OC-12 fiber, the feasibility of centralizing all the Storage Management operations by pulling all district operations back to GHQ is currently being evaluated. We are also in the process of installing and upgrading SQLBackTrack, which will allow us to use hot backups for Oracle instances. This will allow us to backup critical databases while the systems are still available.

JAVA Development Environment

A new application development environment, based on the JAVA language, is being established to enable MoDOT application developers to respond to the increasing need of automation by internal MoDOT business units. This environment is also based on web server technology that will enable newly developed applications to be deployed very quickly to both the internal MoDOT web or to the Internet Web for use by Missouri citizens and others.

Roadway Design Software Implementation

Our ongoing process to replace the department's roadway design software has continued with many more of our users being trained this year. This project began in September 1998 with the initial software release followed by the training program that began in October 1998. This implementation has provided civil design and drafting tools to all users creating roadway design plans. This year we have also concentrated on providing training to consultants who are working on MoDOT jobs. During 2000 the majority of the implementation was completed with over 250 designers, technicians, and consultants being trained in the use of this system.

CUSTOMER RELATIONSHIP MANAGEMENT

These solutions enable customers or stakeholders to gain access to the organization or information about the organization. This includes measuring the quality, cycle time, or value of services delivered to the customer (from the customer’s point of view).

Manta INSIGHT e-survey Application Implemented

Information Systems has implemented an automated survey application. We chose the INSIGHT product from the Manta Corporation (http://www.mantainsight.com/). It is a web-enabled Lotus Notes-based solution that provides both anonymous and targeted surveys with automatic tabulation of results.

Over Dimension/Overweight Permits Application Improvements

We enhanced our Permits application, written in IBM's VisualAge Generator product, to comply with House Bill 1948 that allows the issuance of special moving permits for concrete pump trucks and well-drilling equipment, and regulates use of "dromedaries."

Risk Management Manual Improvements

The MoDOT Risk Management manual was automated with a web-enabled Lotus Notes-based solution. The application tracks new or revised policy from draft status through the approval process, providing a searchable database of policies and forms.

Wide Area Network Improvements

Network bandwidth between the General Headquarters offices and 7 of the 10 District Offices has increased dramatically with the implementation of a new ATM Wide Area Network over OC12 fiber optic cable laid on MoDOT right-of-way. This implementation has greatly improved our ability to provide our customers faster response for computing services between General Headquarters and the District Offices. The ATM WAN is a self-healing fiber optic ring that allows continuous communication capabilities between all functional units. Plans are under way to add the remaining 3 Districts to the fiber optic cable loop in the near future.

Computer Operations Center Improvements

Facilities management at General Headquarters computer operations center has been greatly improved this year. We have added a 100 KVA Uninterrupted Power Supply (UPS) to accommodate all the computing equipment in the computer operations center (servers, mainframe, Enterprise Storage Systems, DASD Systems, tape drives, telecommunications devices and Backup Systems Library) at General Headquarters. Uninterrupted Power Supplies have also been installed in all district offices to ensure availability and protection of servers and telecommunication equipment during short power outages or power spikes. A rack system has been installed at General Headquarters to hold all Windows NT servers and telecommunications equipment for ease of access and manageability. Cable trays have been installed to provide for uniformity of power and data cable runs to equipment. New power supply panels have been installed to allow for dedicated circuits for computing equipment, again for ease of manageability. Systems operations have become more uniform with the installation of our computer operations command center. The computer resources staff is centrally located at General Headquarters to allow for better communication between staff and customers.

Anti-Virus Software Upgrade

Anti-virus software was upgraded on all PCs and servers running Windows operation systems to improve support and to upgrade the scan engine. We monitor all updates to virus patterns on a daily basis and install them as needed.

Dial-up Service Migration

The telecommunications area has completed the task of migrating from Sprint dial-up to the Socket network. This change was required because the Office of Administration changed service providers.

Business Intelligence Software Upgrade

Upgrades to the Impromptu catalogs, as part of the IWR/Impromptu upgrade to version 6, will provide MoDOT with advanced BI features and will allow additional projects to distribute reports to the internal MoDOT web. We also installed the client portion of this software to 900 PCs statewide and converted over 200 internal reports and published them to the internal MoDOT web.

HUMAN CAPITAL MANAGEMENT

These solutions support or measure the acquisition, retention, learning and improvement of employees.

Retirement 2000 Plan

Enhancements to the legacy retirement system were implemented to reflect the changes of the new Retirement 2000 Plan passed by the state legislature earlier this year.

New Human Resources/Payroll/Time Reporting System

In conjunction with Phase I of the SAM II HR/Payroll project, MoDOT implemented the HR/Payroll module of the Advantage software statewide. As part of this project MoDOT developed several interfaces and converted data from several of our existing systems (such as Retirement and Insurance) to be input into SAM II. A few enhancements were also added to the Time Reporting component of Advantage HR/Payroll and were rolled out to over 4800 employees statewide. MoDOT also continues development for a MoDOT HR Data Mart to be implemented in January 2001. During the rollout of this system, this project significantly increased the volume at the Information Systems Help Desk. In November the Help Desk had 2.75 times our normal monthly call volume for the year. On November 2nd we set a new record for calls (534) and we had over 400 calls on each of the following dates: November 1, 6, 13 and 14. In addition, several development tools were installed, including Erwin, a database modeling software; Bowin, a business processes design software; and Model Navigator, for model information.

These tools were used for presentation, analysis and application development functions for the HR Data Mart. FOCUS query software for access to the SAM II Data Warehouse was also installed.

Client/Server PES/LAS (Proposal & Estimates System/Letting and Award System)

Client server PES/LAS version 5.3a was installed for testing in late summer. Version 4.1b is currently being used for production. After several migration issues are resolved, we plan to move to the new version early in 2001.

FINANCIAL MANAGEMENT

These solutions support the fiscal responsibilities of the organization, or the fiscal controls, accountabilities, or financial performance of the various internal work units in the organization.

BRASS (Budget Reporting Analysis Support System)

An instance of the BRASS (Budget Reporting Analysis Support System) was implemented on our AIX/UNIX platform. BRASS is an enterprise-wide budgeting system designed for use by government. BRASS will be used at MoDOT to budget on a performance basis. The number of statewide users is estimated at 200 to 240.

Audit Command Language (ACL)

ACL, a financial auditing tool, was implemented for use with the financial data mart. With implementation of the tool, MoDOT internal auditors will be better able to analyze financial data, provide recommendations for control, compliance with accounting standards, federal and state regulations and better financial management.

From an operational perspective, MoDOT has purchased several hardware or software solutions that support our need to improve our internal and external efficiencies (reliability and speed) in order to reduce overall costs. The following accomplishments represent those projects that have allowed us to consolidate our technical operations.

MoDOT Facility Consolidation

We have planned for and implemented the movement of information technology equipment to new facilities in the Jefferson City area in coordination with overall consolidation efforts of MoDOT General Headquarters personnel. This involved the purchase and installation of network equipment, servers, PCs and software, as well as the physical movement of hundreds of PCs. A new H80 AIX system was purchased and installed at the new St. Mary's Boulevard location to accommodate the Transportation Management System's applications and the road conditions status provided to MoDOT's web site.

PC Purchases

To satisfy prior application upgrades such as Office 2000, we ordered approximately 200 laptops and 300 desktops. Along with this we upgraded all active computer images to comply with software and application standards set throughout MoDOT. In the second half of this year we ordered 500 laptops and 600 desktops to comply with the SAM II HR/Payroll system requirements.

Printers

We have installed 125 High-Speed Laser printers to replace more than 160 Laser and Ink-Jet printers that had exceeded their life cycle and warranty periods, reducing administration and time and materials maintenance costs.

AIX Environment Improvements

The capacity of our AIX computing environment has substantially increased in the year 2000. We have upgraded four S70's to S80's allowing for further growth. We have also upgraded our SP complex from 10 Silver Nodes to the new Winter Hawk nodes with an additional 3 wide nodes, giving a total of 13 nodes. We have also added IBM's new Enterprise Storage Server (ESS) with a total space capacity of 1.5 Terabytes (TB) and plan to install our second ESS fully populated with 36 gig drives, with a total of 4.6 TB, prior to the end of the year. Since new applications such as SAM II Financial, SAM II HR/Payroll and our internal data mart for these applications have come online, our AIX DASD capacity has reached a total of approximately 8 TB.

Token Ring to Ethernet Conversions

New and remodeled district and headquarters offices have been rewired with up-to-date Cat 5 wiring over which we've implemented high speed switched 100 Mbps Ethernet to approximately 700 PC users. These projects have increased network performance, improved network reliability, and increased network manageability.

PIX Firewall Upgrade

Migration from an Internet access design that relies heavily on proxied connections to a new platform that more easily accommodates web-enabled applications and provides higher speed communication is in progress. Also in this project we will deploy an Intrusion Detection System for monitoring and further protecting against Internet hacker attempts. Authorized users will be properly authenticated and their activities logged.

Oracle Data Base Upgrade and Support

The upgrade of Oracle to version 8.1.6 was just completed. This upgrade was required to maintain vendor support and to receive new database functionality. This project involved work on more than 20 servers statewide. We also maintain numerous applications that utilize Oracle databases, such as the SAM II Financial and HR data marts, interfaces from legacy systems to the SAM II Financial and HR systems, the Brass budgeting system, the

Virtis and Opis bridge systems, the Trns*Port DSS and PES/LAS systems, the Q Series library system, the Tivoli Inventory and Software distribution system, the Fleet system, and the SiteManager construction system.

End User Software Installation and Support

Installation of Microsoft Office 2000 on 3400 PCs has been completed. Training for this suite of products has been given at General Headquarters and at district locations. We have also upgraded to Visio 2000, Internet Explorer 5.5, the latest version of PC SAS, and upgraded Lotus Domino to version 4.6.5. All upgrades were statewide.

Tivoli

The Tivoli Software Distribution system has been upgraded from version 3.6.1 to 3.6.2. Other Tivoli activities have included the development and distribution of a number of file packages like Office2000 and SiteManager, the collection of "Software" and "Custom MIF" inventory for all MoDOT PCs and servers, and the development of some generic inventory reports for MoDOT support personnel. We have also upgraded Tivoli Remote Control from version 3.6.1 to 3.6.5, installed Distributed Monitoring 3.6.1, and developed and distributed basic AIX and NT monitors. We have installed Tivoli Enterprise Console (TEC) version 3.6.2 and customized and enabled the TEC to display events such as NetView 6000 events, Distributed Monitors for NT and AIX, TEC Adapters for NT, AIX, SP, and TSM. Finally, version 6.01 of NetView 6000 is now in production in the computer center. With this tool systems operators monitor all of MoDOT's networks, we act on problems when they are detected sometimes even before the customer knows there is a problem. This allows quick response times for repairs of network problems.

Planned Projects

Business Process Improvements

These solutions support or measure internal work processes and how well they are being performed and can collaborate efforts with suppliers or other external providers.

Transportation Management System (TMS) Improvements

During 2001 we plan to create an application that will allow the Missouri State Highway Patrol (MSHP) to enter accident data directly into MoDOT's Safety Management system. MSHP will have access to the transactional and analysis databases to meet their business needs and also to create statistical reports. We also plan to complete the State of the System Detail Report and the new Bridge Module to the TMS application. Also planned is the development of a bridge web application, Bridge Off-System Inspection (BOSI), and is due for implementation in April 2001. BOSI is being written as an Internet-based application replacing an aging mainframe and PC process and will work hand-in-hand with the client/server versions of BOSI developed as part of TMS. This project will

utilize existing servers developed in COOL:Gen along with a Java based front end. Other enhancements include the ability to run reports from the web, a rewrite of the signal and sign application for additional functionality, and to research and implement a Spatial Data Engine (SDE). The SDE is designed to decrease access and analysis time to the volumes of data used in TMS.

Intelligent Transportation System (ITS) Implementation

Information Systems personnel will continue to work with other MoDOT divisions to implement this project. The network, sensors and other hardware are planned for installation this year in several metropolitan areas. The ITS software is also planned for installation, testing and implementation in late 2001.

Opis - LRFD Bridge Design System

Recognizing the great potential for reusing the modular software being developed in the Virtis project, AASHTO is launching its next generation of bridge design software, Opis. Opis employs the same database and graphical user interface as Virtis.

Fleet Management System Improvements

The Fleet Management system must be modified to implement the new Advantage HR/Payroll Chart of Account structure that is planned by July 1, 2001. Several functional enhancements are also planned for 2001.

Help Desk Improvements

Current plans are to implement new Help Desk software, Peregrine's Service Center product, to replace existing software that is outdated and no longer supported by the vendor. Development of a "Quick Order" Catalog that would allow users to browse descriptions and pictures of standard IT items and place an order for them on-line is also planned. We also plan to investigate updating the Help Desk's Automatic Call Distribution (ACD) System to include additional routing and tracking features.

Financial Management

These solutions support the fiscal responsibilities of the organization, or the fiscal controls, accountabilities, or financial performance of the various internal work units in the organization.

Financial Data Mart Improvements

MoDOT will incorporate BRASS and Payroll tables into its financial data mart. This will allow for reporting on budgets and actual expenditures resulting in better financial management.

Windows NT Server Upgrades

The current Windows NT servers will be upgraded possibly in the year 2001. No proposals have been reviewed at this time to give any details.

Router Replacement

This is a preventative maintenance program to replace aging and failing wide area network routers that provide network connectivity to 53 regional construction offices. This project will begin early in 2001.

WAN Fiber Optic Replacement

Given the changing provider market, we are studying the feasibility of an early retirement for high-speed WAN equipment that has been rendered obsolete by recent market changes to more readily available and serviceable components.

Video Conferencing

Now that we have a high-speed wide area network 80% constructed, we are ready to explore the latest technologies in meeting room video conferencing between our primary office locations. This system may also incorporate desktop video conferencing capability and possibly integrate with public service offerings.

IP Telephony

The implementation of Ethernet topology has provided the opportunity to also deploy a limited system of LAN based telephones. This system may play a part in an alternative communications method in the event that normal telephone services were interrupted by natural disaster or other catastrophe.

End User Tools

Current plans are to upgrade Lotus Notes to version 5, which will give significant new functionality to all MoDOT users. In conjunction with this, we will implement a pilot of the Lotus Sametime product, which is a real time text messaging facility similar to AOL's Instant Messenger. We will also begin to deploy Cognos' PowerPlay product, which will give our users another Business Intelligence tool to do data mining. Finally, we plan to either upgrade or begin testing the future versions of common end user tools, such as Adobe Acrobat Reader and Microsoft Office.

COOL:Gen Encyclopedia

Current plans are to migrate from using the COOL:Gen Encyclopedia at the State Data Center to one that runs on our own AIX server. This will save MoDOT a great deal of

money in monthly charges from OA, and will decrease access times for our Encyclopedia processing.

PC Purchases

We plan to continue to purchase PCs that will replace the aging ones in various MoDOT sites statewide. In conjunction with this, we plan to draw up and implement statewide PC standards, involving configuration and usage specifications that will align with a newly published MoDOT Security Policy.

Accumulated Demand

MoDOT has a significant backlog of IT requests. These requests cover all areas of the department, and include many large projects such as the implementation of a new Program and Project Development system, a new Medical and Life Data Management System, a new Facilities Management System, and numerous enhancements or upgrades to existing systems. Requests also include many PC desktop and laptop upgrades or replacements and purchase and installation of various end user computing tools such as Microsoft Project, Visio and PageMaker. If no other projects were approved, the estimated timeframe for completion of this cumulative backlog ranges from three to five years at an estimated cost between 25 and 45 million dollars.

MoDOT's internal demand for systems and IT services has rapidly increased over the past fiscal year. As the complexity and number of implemented systems increase, (causing additional interfacing, repairs and infrastructure changes to be made to accommodate those enhancements), the cost per system also increases. Should these trends continue to pervade our business, there must be an increase in the funding levels for client projects and IS core projects.

Further, as increases of external IT activity outside of IS occurs, there seems to be an increase in the role of non-IS staff performing IT functions critical to the organization. The ratio of consultant-to-IS staff is steadily rising, thus reducing efficiencies and raising costs. More consideration must be given in the upcoming fiscal period to leverage the internal resources and funding required to perform critical operations such those listed in this report.

Office of the State Treasurer

Accomplishments

Unclaimed Property System

This system is one that tracks all unclaimed property for the state of Missouri. We have a searchable database on-line that allows citizens to inquiry by last name about property. If they find a match and were able to e-mail us, we would then send them the appropriate forms depending on the nature of their claim. The addition to this system allows us to generate the appropriate claim form that can be downloaded and printed. This saves us from taking care of all the e-mail requests and mailing out the forms.

Linked Deposit System

This system tracks all of our linked and time deposits made to the banks. These are loans at a lower interest for a specific purpose such as to farmers or students. This is a very paper intensive mainframe system. We are re-writing the whole system in VB, which will eliminate most of the paper work because it will all flow electronically.

Product Summary Book

This is a system that tracks banks and their products that are offered for little or no cost and is produced for the Department of Social Services to use with their welfare clients. This year we have put the book online so that anyone can look up banks by county and see what they offer.

Reconciliation Software

Implemented this year was a software that will allow us to import files from the banks and from our statewide accounting system and reconcile them electronically. We currently reconcile about 250 accounts by hand.

Imaging

All checks are currently microfilmed, and when we need to find a check to determine if it has been cashed, we use the microfilm. The bank images all our checks so we have begun a project to get all the checks in on CD's and then load them to be inquired upon

by our General Services area. We have the jukeboxes in and are having some difficulty with the hardware, but plan to have them operational soon.

Planned Projects

Unclaimed Property System

As part of the e-government initiative, we plan to allow for the claim forms to be sent back to us electronically and automatically update our system. We also plan to allow for unclaimed property checks to be done during other processes. For example, when a person renews their driver's license it would also do an unclaimed property check. As systems are developed and brought on-line through the e-government initiative, we hope this process will be incorporated.

Linked Deposits

As part of the e-government initiative, we plan to allow the banks to return their application forms electronically. This process will automatically update our linked deposit systems. Any other information that is required by the banks, such as a financial statement, will also be sent electronically and automatically update our system.

Bank Book

A pilot project is planned to allow a bank to put an application on our website that can be downloaded by a caseworker, filled out for the client and either faxed or sent electronically to the bank. Many welfare clients do not want to go to a bank and it would make them more comfortable to have a caseworker help them fill out the application for the checking account or savings account.

Accumulated Demand

The State Treasure's Office has an outstanding list of about 10 projects to be completed. With our current resources, we will probably be able to accomplish about half of them. The highest demand we have is to try to work with interfaces in and out of the SAM II system. Because of the changes in how we are able to get the data from SAM II, a great amount of time is spent pulling our own files and massaging them to run into our current systems in order to balance and reconcile the state's accounts. Since this is one of the highest priorities of the Treasurer's Office, along with completing the new Linked Deposit system, all other projects will depend on the amount of resources needed to accomplish these tasks.